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VARICOCELE:¹

Its Congenital Origin; Its Effect in Civil Life; Its Military Aspects; Its Operative Treatment, when
(a) Necessary, (b) Expedient.

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Some months ago a letter from a respected member of the Branch appeared in *The Medical Journal of Australia*, soliciting an expression of opinion on the effects of varicocele from a military viewpoint.

As the object of that letter, laudable at any time, but especially so at the present momentous epoch in our titanic struggle with Prussian militarism, has so far failed of realization, I thought that the same end might be more effectually achieved by inviting a discussion by the assembled members here this evening on this important subject. I shall not, however, confine my remarks to the military aspect alone, but shall widen the horizon, so as to elicit your reasoned opinion on other aspects of the condition.

There are few surgical conditions regarding the aetiology of which there is more divergence of opinion, whose presence occasions its possessor more ill-founded apprehensions and the charlatan more ill-gotten gain, whose careful study gives earnest, capable and honourable observers more genuine difficulty in assessing at their true worth its consequences to the individual and to the organ, and the necessity or the expediency of operative interference.

Aetiology.

Many of us remember, when preparing for our surgical examination, how glibly we could recite the many alleged causes of this condition, such as (a) the great length and tortuosity of the pampiniform plexus, (b) their dependent position and their lack of support from the surrounding tissues, (c) the feeble *vis-a-tergo* with which the blood circulates through them, owing to the small calibre and great length of the corresponding artery of supply, (d) and the constant pressure to which they are subjected by the contraction of the abdominal muscles. Another batch of causes had to be in readiness, in anticipation of another favourite question with examiners, Why it was so frequent on the left side? One answer was that the left testis hung lower, and, therefore, the greater length of the left spermatic vein accounted for the greater frequency with which the left side was affected. Should this explanation not prove sufficient, another was forthcoming. The left spermatic vein entered the left renal vein at a right angle, whereas the corresponding vein on the right side emptied itself into the *inferior vena cava* not at a right but at a very acute angle. If the examiner was not yet satisfied, the influence of a

loaded sigmoid flexure in retarding the return of blood from the left spermatic vein was pressed into the service. Not reflecting—it did not strike us—that these are, after all, but anatomical conditions common to all healthy men, and what had to be explained was the occurrence of cirsocele in a few. It seems far more probable that varicocele is an anomaly of development, and that it is as much an arrest of normal evolving changes as that of hare-lip or cleft palate. To illustrate this, it is well to recall a few facts in the embryology of the uro-genital system. In the embryo, the pampiniform plexus at first belongs to the Wolfian body and to the Wolfian duct, and is, later on, on the development of the permanent kidney, transferred with the epididymis and *vas deferens* to the service of the genital gland (Fig. 1.). A striking feature of the Wolfian body or mesonephros is its great vascularity. Not only has it a large segmental supply of arteries and veins, but it also for a time plays the part of a true "renal portal" system to the posterior segments of the body by growing into and breaking up a part of the cardinal vein, so that the venous blood from this region of the embryo passes through and is elaborated by it (Shore).

In the course of development (as contrasted with growth), many of these embryonic veins become either obliterated or considerably diminished in calibre, as may be seen if sections be made of the spermatic cord at various stages (*cf.* Figs. II. and III.) And this obliteration goes on to a further stage or to a more marked extent on the right side than on the left. A section of the cord in a full-time fœtus shows that the united lumina of the veins on the left side is considerably in excess of a similar section in the right side. At and after puberty the veins can be felt in the majority of persons on the left side, if the dartos and cremaster are relaxed. Now rapid developmental changes take place in the entire sexual apparatus at puberty, and it is these changes supervening on veins with an excessive persistence of the fœtal condition producing dilatation, elongation and sacculation that constitutes the condition of varicocele. In other words, varicocele is a variation in excess due to a pre-natal error of development.

The Effect of Varicocele.

We have now to consider its effects in civil life, and we do so under the following headings: The effects (a) on the nutrition and function of the testicle, (b) on the working capacity of the individual.

Effect on the Nutrition and Function of the Testicle.

Many writers have written too dogmatically when treating on the effects of varicocele. Dogmatism is inadmissible where authorities of the highest standing are diametrically opposed. That the difference of opinion here of very respectable observers is acutely marked will be manifest if we take a

¹ Read at a Meeting of the New South Wales Branch of the British Medical Association on November 12, 1915.

rapid retrospective glance on the literature of the subject, and cite a few authorities from opposite camps.

Curling, whose work on "Disease of the Testicle" occupied a high place in public esteem, at least in a former generation, writes:—

"Varicocele tends gradually to impair the nutrition and diminish the secreting powers of the testicle, hence the importance of not neglecting this complaint, though it may produce no painful symptoms. A softening and partial atrophy of the gland, co-existing with varicocele, has come under my notice in numerous instances. Indeed, in nearly all the cases in which there was a decided dilatation of the spermatic veins on one side only, the testicle on that side was the smaller of the two."

Barwell, formerly Surgeon to Charing Cross Hospital, after having a large experience in varicocele, stated:—

"That the testicle from which a varicocele springs is not of much use."

Marked wasting of the testicle has been frequently recorded, but that the function of the organ may be also destroyed would seem probable from a case reported some years ago, where there was a varicocele on the left side, the testicle of which was a third smaller than its fellow. An attack of epididymitis supervened in this latter, and, on examination of the semen, no spermatozoa were to be found.

After hearing such evidence, we may feel disposed to consider the question as settled. To check such hasty conclusions, our mental attitude will be that of suspended judgement till we hear the other side. Fortunately, we have Sir James Paget, in his essays, and in his own inimitable style, stating the case for the other side as follows:—

"There are some to whom, whether through ignorance, misguidance, hypochondriasis, a varicocele is a source of misery and dismay. They look upon it as a forerunner of impotence, and I know not what besides. All such fears are groundless; varicocele is troublesome, because of the sense of weight which sometimes, though far from always, attends it, and which is much increased by standing or walking. In some cases, too, the dilated veins, like varicose veins in the leg, are apt to become inflamed and very sensitive. But this, I believe is the widest extent of the harm that a varicocele ever does. I do not believe that it ever produces wasting of the testicle or impotence, or any such thing."

Again, Sir Ashley Cooper says:—

"Varicocele could scarcely receive the title of disease, for it produces, in a great number of cases, no pain, no inconvenience, no diminution of virile power."

No good purpose would be effected by citing additional authorities. Suffice it to say that the most capable and earnest observers have expressed widely divergent views as to the influence of varicocele on the nutrition and function of the testicle. Nevertheless, we think we will not be far wrong if we adopt a *via media*, and say that a calm, impartial and unprejudiced observation of varicocele will show in the vast majority of cases that the testicle on the affected side is smaller in size, softer and more flabby in consistence, but that judgement must be suspended as to how far its functional value is impaired, for the simple reason that it is not often

that the virile power of its possessor depends, as in Gosselin's case, on the affected testicle. The testicle is smaller in size and softer in consistence than the normal gland, not because there is wasting or atrophy of the gland, both of which terms imply a retrogression from a more perfect state, but because there has never been proper development of the gland. It is a question not of the organ having been put back from, but of its never having arrived at the goal of full development. It, too, has been arrested or checked in its forward march, either as a consequence of, or concomitantly with, the arrested development (retrogression) of the pampiniform plexus, and, therefore, we may not inappropriately define varicocele as a varicose condition of the spermatic veins of congenital origin, resulting in a deficient development, and associated with a functional imperfection of the corresponding testicle in the majority of cases.

Effect on the Working Capacity of the Individual.

Here, too, authorities are divided in their opinion, but we think the case may be fairly stated as follows: In non-tropical climates, in the robust and healthy, in whom the cremaster and dartos function as an efficient suspensory bandage, varicocele is painless, and does not materially influence the working power of the individual. On the other hand, in tropical climates, in weak, anæmic, and easily fatigued men, varicocele causes an aching in the testicle, in the groin and loins, and not infrequently gives rise to a sense of weight and dragging, and at times to severe pain, radiating in the direction of the cord. Nor is this a matter of surprise when we reflect that though the chief motive force of the venous circulation is essentially the left ventricle, yet there are certain accessory mechanisms, such as interrupted muscular movements and negative intra-thoracic pressure, which are of considerable importance, and that the influence of these latter is largely absent in cases of varicocele with a toneless cremaster. Everyone is familiar with the venous engorgement which can be produced by allowing an arm or a leg to hang vertically for a short time with as little action of the muscles as possible. Soldiers have been known to faint from standing motionless for a considerable time. It is to counteract this undesirable effect of standing still on the venous circulation of the legs that our Australian soldiers are taught "to mark time" so admirably. By the interrupted muscular movement which "marking time" involves, use is made of the valves which support the blood pressed towards the heart by one muscular contraction, while, during the period of muscular relaxation, the veins are filling again from the periphery. This mechanical advantage of interrupted muscular movement is absent in the case of the pampiniform plexus, and, hence, when these veins are varicose or dilated, and where other causes of temporary fullness occur, such as long standing, riding and sudden exertion, these latter act like the proverbial "last straw" in distending the veins, increasing the swelling and in aggravating the unbroken back pressure on those delicate venules which, traversing the *mediastinum testis*,

PLATE ILLUSTRATING DR. JOHN FLYNN'S ARTICLE.

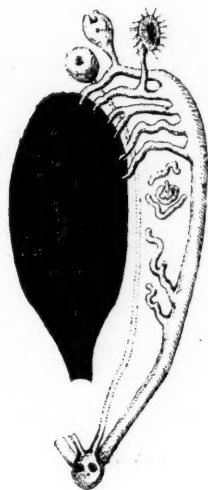


Fig. I.

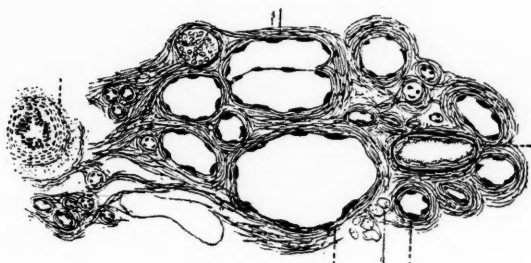


Fig. II.

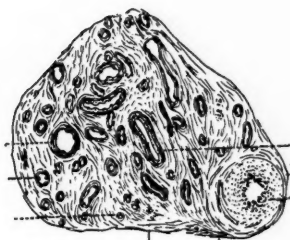


Fig. III.



Fig. IV.

PLATE ILLUSTRATING DR. JOHN FLYNN'S ARTICLE.

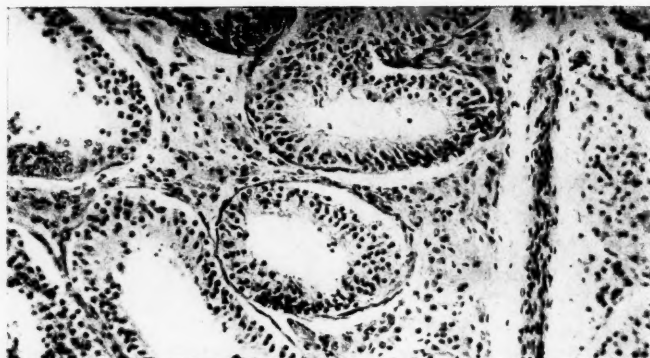


Fig. V.

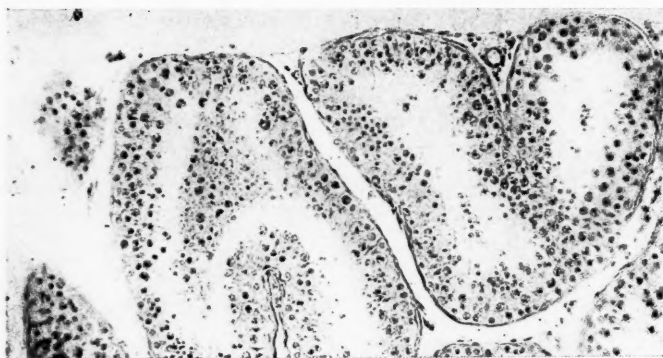


Fig. VI.

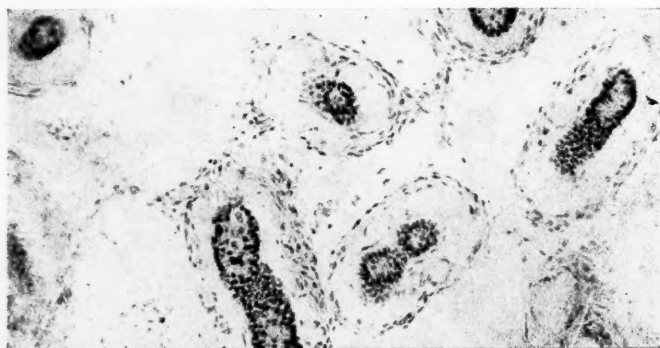


Fig. VII.

are spread out on the fibrous septa and radiate on the unyielding, deep surface of the *tunica albuginea*. Hence, too, the increased discomfort often felt towards evening; yet it would not be correct to say that the intensity or degree of pain varies with the size of the cirsocele, some of the smallest cirsoceles giving rise to the loudest complaints, whereas, on the other hand, very large ones are sometimes almost free from pain, probably because of their more tortuous course, the weight of the column of blood is subdivided or broken up.

Military Aspect.

We now approach an aspect of varicocele which has the most interest at the present momentous crisis. Is the army regulation that vetoes a candidate with a varicocele well-grounded, or has it outlived its utility? In other words, should a varicocele be a bar to admission to the services? Before proceeding directly to answer this question, it may be well to premise that a departmental regulation may have its origin and its justification, not so much because its framers believe that the particular condition specified of itself nullifies the utility of, or is an intrinsic disability to an otherwise efficient and zealous soldier, but rather because it affords pretexts to the counterfeit article, to the mere mercenary—the seasoned campaigner in “declaring sick” for evading duty or escaping punishment for such evasion. In this connexion it may be well to recall some remarks made in an Army Medical Report over half a century ago, by the late Sir Thomas Crawford, Director-General, A.M.S.:—

“With a view of determining the extent to which lesions in the genital organs are disqualification in a soldier, it may be well to premise that it has been generally held by army surgeons that recruits, having any disability which can by any possibility interfere with the free motion of the body or extremities, or which may give colour to the alleged existence of pain, should be rejected. This well-grounded opinion rests on the accumulated experience of the department, and is supported by the fact that indifferent characters having such disabilities, never fail to allege their existence, either as an excuse for the non-performance of duty or for the avoidance of punishment. So long as a soldier can demonstrate the existence of a disease in any organ, so long will it be impracticable to punish him for malingering, to avoid his duty on the one hand, or the penalty of his offences on the other. It is this contingent circumstance, and not any well-grounded belief in the disqualifying nature of many alleged disabilities which leads to the rejection of recruits for blemishes which in no way affect the efficiency of a willing soldier.”

We thus see that the official regulations, rejecting recruits affected with this or that condition does not necessarily imply that the authors of such regulations believe that such flaws are an inherent disability to active service, but rather they are enacted to guard against the possibility of those so affected making use of such defects as a plausible plea for exemption from duty. For instance, in the case of varicocele, they take the view that a man who wants to shirk work can always say that he suffers pain from it, and we will guard against such a contingency by not allowing him to enter at all.

Now the question arises, is it often in actual military practice that a varicocele comes under treat-

ment, or that it is made an excuse for evading duty? As in everything relating to varicocele, opinion here is far from unanimous. On the one hand, Colonel Howard, Senior Medical Officer of the London Recruiting Area, will answer:—

“In an experience of 30 years, I have never treated an officer or a soldier for varicocele, and it would be futile to contend that during this period there did not exist many hundreds who must have had the disability.”

On the other side, listen to H. I. Godwin, late civil surgeon, South African Field Force:—

“During the two years I was civil surgeon with the South African Field Force, I saw many cases in which varicocele did very greatly interfere with the ability of a soldier, and often prevented him from performing his duties on active service from pain and increase in size of the varicocele. I remember one man who wore out his suspensory bandage marching, and I know that that man used to suffer agonies from his large varicocele. At times, he felt quite sick with pain, and would always take the opportunity of bathing his varicocele if he came to a water course on the march. He was very plucky, and would not ‘go sick,’ although I advised him on several occasions.”

I think we may not inappropriately conclude this portion of our subject by stating that, while on rare occasions varicocele can and does interfere with the performance of his duties by the soldier, and while on still rarer occasions it may afford a pretext for malingering, still the frequency of either count or both combined is scarcely sufficient to justify the exclusion of a large percentage of otherwise suitable men. If this be true at all times, it is still more true at the present eventful epoch in the Empire's history, that no unnecessary hindrance should be interposed to the admission to the army of candidates that may do it and themselves credit. The authorities then might be well advised to alter or modify the regulation issued to medical officers when examining recruits to some such effect as this: That varicocele will not be a bar to admission provided that the candidates sign a form on passing into the service, stating that they are prepared to undergo an operation if the condition interfered in any way with the proper performance of their duties.

I have no means of ascertaining how many Australian recruits are refused admission on account of varicocele at the present time, but if we are to judge from the statistics in other countries, the number must be considerable. Thus, Curling found that 23% of recruits for the English army had varicocele. Senn estimated its presence in 25% of the recruits for the American volunteer army, and its frequency in French recruits is put down as 10%.

Indications for Treatment.

We have now to discuss the indications for operative treatment, and, before proceeding directly to these, it may be well to pass in review some of the remote results that follow operative interference. These may be best considered under two separate aspects (a) from that of the individual, (b) from that of the services. And, in a general way, it may be stated that from the point of view of the services, the operation, as a rule, attains the end in view, namely, that of making a man fit who was previously unfit, inasmuch as it relieves the symptoms

due to back pressure on the venules and nerves, whereas on the other hand the results to the testicle are not always all that could be desired. In a considerable number of cases the testicle becomes indurated from the development of fibrous tissue. Indeed, since the results of Corner's investigations on the after-effects on the testicle of operation for varicocele have been made known grave doubts have been expressed as to the advisability of operating in civil practice as frequently in future as has been done in the past. According to Corner, fibrosis of the testicle is present in 90% of cases after operation. So, far from operation saving the testicle from the fibrotic changes which varicocele is credited with producing, according to this observer, it precipitates the very issues it was designed to avoid. From the point of view of the gland, already imperfectly developed and functionally impaired, it only hastens its "decline and fall." It had become almost a traditional belief, mainly from the teaching of Sir William Bennett, that the testicle, from being soft and small, became, after operation, more natural in size and consistency, and more perfect physiologically. Whether the results of Corner's investigations should alter materially this belief, whether they express the end results of operative interference generally, or whether there were exceptional complications in the series from which he derived his results is difficult to decide. May it not be that fibrosis and other results of post-operative venous congestions, such as increase of size, often give but a deceptive appearance of improvement in consistency and size, and who can say what the procreative power of such a testicle may be if the owner were dependent exclusively on it?

Without wishing to dogmatize, and while desiring to leave this aspect of the subject open to receive more light from your discussion here to-night, enough has been elicited to bid the surgeon pause when a case of varicocele presents, before recommending operative treatment. This pause should, if anything, be more prolonged when the patient is one from whom a prospective generous remuneration looms in the distance. It is easy on such occasions, even when the *sacra fames auri* is only moderately developed in the surgeon, to find plausible pretexts for making the immediate result—brilliant it may be in the beauty of the scar, in the raised position of the testicle, and in the restored symmetry of the scrotum—out-balance unduly the more than doubtful, remote results on a gland which, in the words of one of the best workers on present-day endocrine physiology is given for the preservation of the species and the continuity of life, and which always possesses a modelling influence upon the individual bearer of life. As this modelling influence of

the gonads on the individual bearer of life is most manifest during the developmental period, and as the candidates who are required by the services to submit to operation are generally young subjects, it may be well to indicate some special undesirable results that may follow operation in such subjects. In this connexion it is well to bear in mind that, in addition to the spermatogenic cells (spermatogonia, spermatocytes, spermatides and sperma), the testicle also contains what are known as "interstitial cells" (Fig. IV.) or Leydig's "between-cells,"¹ and, further, that the hormone that gives to the budding young man his male characteristics is elaborated in these latter. Now, such investigators as Bouin and Ancel, working on rabbits, give as their opinion that resection of the spermatogenic nerves in the cord, the vas being left intact, may lead to atrophy of the cells of Leydig. Ligature of the vas deferens, on the other hand, destroys the generative portions of the gland only, and

leaves the cells of Leydig with their functions unimpaired. Now, applying these facts to the operation on varicocele as usually performed, while painstaking care is bestowed on the vas, and very properly so, lest the generative function be injured, no care is bestowed on the spermatogenic plexus, which accompany the spermatic artery, and generally lies behind the anterior group of spermatic veins. And yet we have high authority for believing that injury to that plexus may lead to atrophy of the cells of Leydig, which pre-empt over the acquirement of secondary masculine characteristics.

I do not believe that the few filaments of the hypogastric nerve plexus, running along the artery of the vas, have any influence on the nutrition of the testicle. I am perhaps courting adverse criticism in thus uttering a plea for more care of the spermatic

plexus. I am not, however, aware of any gland in the body, the nerve supply of which can be injured or cut away without its undergoing physiological change, and the testicle, I feel confident, is no exception. The deleterious changes here are not on the spermatogenous epithelium; the individual is not rendered sterile, but on the interstitial cells of Leydig (Fig. VI.) the very reverse of what occurs in the cryptorchid gland, which shows on microscopic examination an abundance of the interstitial cells of Leydig, whereas the tubular or spermatogenous epithelium remains undeveloped (Fig. V.). When we reflect, then, that the testicle, through the interstitial

DESCRIPTION OF PLATES.

Fig. I. (modified from Kollmann), illustrating the transference of the Wolfian body and Wolfian duct (blue) to the service of the genital gland (red). The pampiniform plexus, which is transferred with it, is not shown, but is represented in transverse section in Fig. II.

Figs. II. and III. (modified from Spencer), the comparison of which shows the retrogressive changes that take place in the pampiniform plexus, the absence of which, together with the developmental changes occurring at puberty, constitutes varicocele. In Fig. II. the foetal stage is seen, which, when persistent, constitute varicocele. Fig. III. represents the fully developed stage.

Fig. IV. — Leydig's cells, showing Reinke's crystals (modified from Eberth).

¹ There is reason to believe that the interstitial cells of the testis are originally derived from the cortex of the supra-renal gland. As the genital gland descends to the pelvis it carries with it buds from the supra-renal cortex. These, scattered along the line of descent, form accessory cortical adrenals in the course of the spermatic veins. Other buds become imbedded in the sex glands, giving rise to the interstitial cells of the ovary and to the interstitial cells of the testis. That the cortical cells of the adrenal influence the growth and reproductive powers of the animal, witness the cases of cortical overgrowth, causing early adolescence and sexual precocity.

cells of Leydig, ministers to the growth of both primary and secondary sexual characters, it is not difficult to realize that a vast amount of irreparable damage may be done by operation in young subjects. The younger the subject the greater the harm done. It would carry us too far afield to show how easily "hormone balance" elsewhere may be upset by such operations, necessitating physiological adjustment on the part of other endocrine organs, which it were better they would not be called on to give.

In older subjects, after the secondary sexual characteristics have been fully acquired, the worst that can happen from injury of the plexus would be reversible tendencies on the part of the cells of Leydig, and these are less easily induced, and, therefore, in mature adults, the ill-effects on this score are largely absent.

It is largely due to bounteous Nature, which supplies us with two organs, that undesirable results to the individual are not more often manifest. Operative interference generally concerns only one organ, and the other is left with unimpaired function, which, at least, masks the unphysiological effects of the operation.

The modelling influence of the genital glands on the individual is done largely through the co-operation and chemical correlations of the other endocrine organs. The stature, the length of the arm and leg, the colour and consistency of the hair, the tonicity of the muscles, the sound of the voice and the size of the larynx are all under the sway of and conditioned by hormone producing glands. Each of the endocrinous organs acts on and is acted on by the gonads. Witness the influence of castration on the pineal body (atrophy) and on the hypophysis it is known to cause hypertrophy, or those cases recorded in French literature as *insuffisance pluriglandulaire*, where there is marked inter-dependence of function between the genital gland and other endocrine organs. Here the aphasia of genitals is primary, and, as a consequence, there is found post mortem atrophy of the thyroid, persistence of the thymus, increase of the pituitary and defect of the supra-renals. So close is the relation between Leydig's cells and the pituitary that the highest authorities are divided as to whether the underlying factor in Fröhlich's syndrome is primarily a genital hypoplasia or hypophysial struma. Were it germane to our subject, it would not be difficult to supply further evidence of the inter-dependence of the gonads and other endocrine glands. Indeed, we may say of the organs of internal secretion: "Whether any member suffereth, all the members suffer with it." Reflection on these facts will cause the surgeon in any operation to deal kindly with the testicle, to avoid rude anatomical injury, which, for all he

knows, may be followed years afterwards by degenerative changes not exclusively confined to the organ traumatized. This especially applies, needless to state, to young subjects.

Having now passed in review some of the remote, undesirable results which may follow operative interference on a cirsocele, we proceed to the indications which may be laid down if the operation is to be performed with discrimination, and we would say that the operation may be necessary (a) To meet "service demands," though we would express the hope the day is not far distant when these demands will be considerably modified, so far as Australian soldiers are concerned. (b) If there has been a history of recurrent phlebitis and thrombosis. (c) When pain in individuals of stable mental equilibrium does not yield to palliative treatment, and yet materially interferes with their usual avocation. (d) When there is marked local tenderness or great

increase in size, not due to a cause outside the testicle, e.g., renal growth. The operation may be expedient (1) in persons changing their residence from a temperate to a tropical climate, where a small varicocele becomes large on account of the relaxation of cremaster and dartos, (2) in persons undergoing an operation for the radical cure of hernia, where a varicocele is also present, (3) when the size alone of the varicocele or the dependent and horizontal position of the testicles interferes with the individual's ordinary calling. It is well to bear in mind that no operation will either reach or benefit the underlying psychological abnormality which not infrequently co-exists.

Types of Operation.

With regard to operation itself, it is not necessary to refer to the many ingenious methods that were used before the days of surgical cleanliness, as they are now merely of historic interest. At present, there are two types of operation. (a) In one, a special effort is made to avoid any injury to the spermatic artery, and in which it is not deemed necessary or advisable to remove the entire anterior group of veins, about a third or so of these being left to aid the deferential veins, which drain into the deep epigastric veins, in securing the venous return from the gland. (b) Not only is no effort made to safeguard the spermatic artery, but it is deemed an advantage to interrupt the circulation through it, and also to be satisfied with nothing short of the entire anterior group of veins, and both these objects are attained after previous separation of the vas and its vessels by ligaturing *en masse* the remainder of the cord enclosed in its sheath. It is desirable to digress here somewhat, with a view to get a clear grasp of some debateable anatomical points.

It is held by many as a sort of traditional belief

DESCRIPTION OF PLATES.

Fig. V.—Well developed interstitial cells of the testis, with imperfectly developed epithelium in the seminiferous tubules. There were no spermatozoa, but the secondary sexual characteristics were well developed.

Fig. VI.—Absence of interstitial cells, with fully developed seminiferous tubules. The owner was fully potent, but the secondary sexual characters were wanting.

Fig. VII.—Absence of both interstitial cells and epithelium of the seminiferous tubules. The subject was both impotent and without secondary sexual qualities.

(Modified from Harvey Cushing.)

that the separation of the vas from the pampiniform plexus entails also a similar separation of the spermatic artery; that the vas, as it were, carries this vessel with it. A moment's reflection will show that this is not the case. On the contrary, the spermatic artery remains close to or rather is surrounded by the pampiniform plexus. As a matter of fact, the latter structure gets its name—tendrill-like—from the manner in which it entwines the artery, and where the plexus exists as such, *i.e.*, from the testicle to the external abdominal ring it is practically impossible, unless by a tedious dissection, to include the entire plexus without, at the same time including the artery. On the other hand, if it is desired to spare the spermatic artery, the best way is to begin the separation of the veins at the external abdominal ring, or a little higher, where the plexus is being replaced by three or four veins. Ligate proximally and clamp distally here. On lifting the distal end with the forceps, strip these off with gauze from the remaining structures as low as the upper part of the testicle, where they are ligated again.

As hydrocele of the *tunica vaginalis* frequently follows the operation, even in competent hands, in 23% of cases (Corner) it is generally well to anticipate this by everting the *tunica* and securing it in the everted position by two or three catgut sutures. With regard to the supplementary shortening of the scrotum, I do not consider it necessary, as when the cord is shortened by uniting the distal and proximal segments of the ligated veins, and the dependent position of the testicle corrected, the scrotum, or, rather, the dartos, spontaneously contracts to a sufficient extent. It is also well to avoid injuring the genital branch of the genito-crural nerve, so that the cremaster can resume its function of a natural suspensory to the testicle. The areolar tissue surrounding the veins, which are to be tied and removed, should not be wounded or injured, except in so far as is necessary to expose the veins for dissection. The veins should not be separated by any crude incision through the connective tissue uniting them, as the small veins in the areolar tissue become important aids in the venous return. Atrophy of the testicle may follow as direct result of hopeless anatomical injury inflicted during operation to these little vessels, even when the deferential vessels are left intact. The less the vas is meddled with at all the better; not so much on account of the vas itself, as the readiness with which thrombosis occurs in the deferential veins.

I have now dealt with the more salient features of the operation, from the operating theatre point of view; but, to show how unphysiological the operation is under the best technique, it is desirable to view it from the sidelights thrown on it by the experimental anatomist, and the only reason that unfavourable results are not more palpable is that we are dealing with a bilateral gland, and, generally, one gland is left uninjured.

In either type of operation there is an inherent defect. If we plan the technique of the operation so as to safeguard the spermatic artery, along which the spermatic plexus of nerve is con-

ducted, we run danger of producing degeneration of the testicle. The teaching of Sir William Bennett is very emphatic on this point, and is based on the experimental work of Griffiths, of Cambridge, on the testicle. This investigator has proved beyond all reasonable doubt that when the efferent vessels alone are removed, the full stream of blood being allowed to be sent to the testicle by the spermatic artery, degeneration is more likely to occur than when the afferent and efferent vessels are of proportionate capacity as they are when the circulation of the testicle is carried on mainly by artery of the vas and its corresponding veins. If we excise the spermatic artery along with the veins, we are certain to excise the spermatic plexus of nerves, and thus probably induce atrophy of the cells of Leydig, so that we are placed on the horns of a dilemma. If we try to avoid the scylla of degeneration of the testicle we approach the charybdis of interfering or annulling the proper development of the secondary masculine characteristics in a young subject.

For these reasons, efforts have been made at various times to re-establish the altered venous circulation under better physiological conditions. To this end, Durante's operation seems to have found favour with some surgeons. In this operation a catgut ligature is passed with a curved needle round one or more veins of the pampiniform plexus, is then knotted, passed and repassed, working from below upwards, so as gradually to surround and strangle more and more of the venous mass. The least abnormal of the veins can be left. When the process has been carried up to the external ring, the ligature is fastened with another knot. The two knots, upper and lower, are now united. There is practically no real danger of injury to or of catching the nerves. This operation causes little or no disturbance, nutritive or functional, of the testicle.

A REVIEW AND INVESTIGATION AS TO THE CAUSE OF RECENT CASES OF ANÆSTHETIC POISONING.

By Mark C. Lidwill, M.D. (Melb. et Syd.),
Tutor in Anaesthetics, University of Sydney.

I have been asked to collect the recent cases of death and trouble that have arisen during the course of ether administration. In preparing this paper I have experienced extreme difficulty in ascertaining the facts. Through the courtesy of Mr. Young, the deputy Registrar-General, I have been able to get hold of the records of all the cases that have been before the Coroner's Court during the months of February to June, 1915 inclusive. Other cases of trouble have been kindly submitted to me by numerous doctors, for which I thank them. Without their information it would have been impossible to write this paper. Having got my facts together I have attempted to account for phenomena. Our knowledge of the pharmacology of ether and the majority of the anaesthetics is sufficiently far advanced to warrant a considerable amount of deduction in regard to what has occurred; it is possible to determine whether the anaesthetic used has

produced its ordinary normal effect, or whether some adventitious body has been at work. In this matter I have tried to be absolutely fair, and put the blame where I think it should have been put. If I have erred I shall be very pleased to be corrected. I have put every case on trial. I have asked certain doctors, who give a large number of anæsthetics, what their experience has been with anæsthetics since the outbreak of war, and in nearly all cases they have permitted me to use their names and cite their experiences. In certain cases it has been impossible to get very full particulars on account of the fact that the administrator has gone to the war. Before proceeding to go into the individual cases of trouble while under the influence of ether, I would like to point out that in all the cases in which trouble has been experienced during the early months of the year, the effect has been that of pure respiratory failure.

Now pure respiratory failure can only occur in three ways:—

- (1) Reflex respiratory shock, due to commencing an operation before the patient is properly under the anæsthetic;
- (2) from obstruction of the air ways;
- (3) from a toxic overdose.

The last condition never comes on without warning. Either the breathing becomes feebler and eventually stops, or the deep breathing becomes gasping, and after a little time stops; in either case the patient shows signs of profound narcosis.

Now I would draw your attention to a well-known fact, as Hewitt puts it:

The all important fact concerning respiratory failure in moderately healthy patients under ether narcosis is that, however such failure may arise, the circulation at the moment when breathing ceases, is sufficiently satisfactory for remedial measures to be almost invariably successful. The heart is not likely to fail unless restorative measures be delayed too long.

1. The first case we take from the Prince Alfred Hospital is a male, aged 66 years, suffering from hypertrophy of the prostate and uræmia, together with aortic regurgitation. His bladder had been punctured several times to relieve his symptoms.

In this case open ether was given, and the patient's condition was extremely critical before the anæsthetic was given, and we cannot blame the ether in any way for causing the death of the patient, as it was an operation *in extremis*.

2. Female, aged 23, was subjected to curettage, shortening of the ligaments and appendicectomy. Ether was administered by the closed method for 100 minutes, when the patient suddenly died from combined cardiac and respiratory failure, shortly after the wound had been sutured. The anæsthetist has gone away, and I have therefore been unable to obtain any information regarding this case.

3. A female, aged 39, was anæsthetized for the operation of gastrostomy and cholecystotomy. Open ether was administered for one hour. The patient was *in extremis*. A ruptured gastric ulcer was present. The anæsthetist has also gone away.

4. and 5. The following notes have been kindly handed to me by the acting Superintendent of the Sydney Hospital.

There have been two deaths recently.

Firstly, a male, aged 70 years, suffering from malignant disease of the larynx. A very little chloroform was given at first, and this was followed by ether, given by the open method. As soon as the operation was commenced the patient died from combined cardiac and respiratory failure, 20 minutes from the time of the first inhalation of the anæsthetic.

This case was an extremely bad one, the patient was very weak, and was, so I am informed, a very bad subject for an anæsthetic.

The other case at the Sydney Hospital was one of death during chloroform anaesthesia, and does not interest us at present.

I am informed by the Acting Superintendent that, during the earlier part of the year, they found one batch of ether had a very objectionable smell, and caused salivation and laryngeal irritation. They substituted another brand of ether. At a later date they gave the first make of ether another trial. For some time now they have been using very little else than this brand of ether, and have found it satisfactory.

In looking into the circumstances of this death at the Sydney Hospital, we must first consider the age of the patient, which was 70 years, and next the nature of the disease, *viz.*, malignant disease of the larynx. In this condition there is nearly always some obstruction to the respiration. If this be slight it does not seem to cause much trouble, but if it is at all marked it makes the administration of an anæsthetic a very serious matter. As soon as the anaesthesia deepens at all the auxiliary muscles of respiration are inhibited.

Respiration is then left entirely to the care of the automatic respiratory muscles, which have not much power of overcoming any marked respiratory obstruction.

Added to this, we have the general condition of the patient, namely, one of general enfeeblement, and, lastly, like the last straw that broke the camel's back, there were the peripheral stimuli due to the surgical procedure. I think that the preceding, added together, are quite sufficient to account for the death of the patient, without supposing anything to be wrong with the ether.

6. Case from the Lewisham Hospital. A female, aged 24, stout, was operated on for internal shortening and removal of the appendix. The anæsthetic was ether, given by the open method, preceded by a little chloroform. The patient was normal throughout the operation. At the end of the operation she was breathing normally. After the mask had been removed for about a minute, the patient was changed from the Trendelenburg position to the ordinary horizontal position. Immediately this was done the respiration failed suddenly, yet the heart was beating well. Artificial respiration was commenced and continued for some time. For a long time the heart

continued to beat, but it eventually stopped, and, in spite of every means of resuscitation, the patient died.

In considering this case, we must first look at the general condition of the patient. This, I am informed, was apparently normal, except for a general stoutness, but that would in no way contra-indicate an anæsthetic.

Reflex respiratory shock due to surgical interference will not account for the death. Obstruction of the air passages will not do so either, as those present at the death state positively that there was none.

Toxic overdose of ether will not account for it, as this condition is nearly always recovered from if the heart is beating.

The condition of respiratory failure arising on the change of position from the Trendelenburg to the horizontal position may be accounted for by the diminished blood supply to the medulla, the previous condition of cerebral hyperæmia being sufficient to prevent the respiratory failure coming on.

Two of the doctors, who give a large number of anæsthetics at Lewisham Hospital, inform me that they had to give up using ether from one source, on account of the tendency to respiratory failure, and also on account of the amount of respiratory tract irritation that it set up. The surgeons also objected to this ether, on account of the objectionable smell, and because the patients did not do well after it. I might say that in the majority of these cases ether was given by the open method.

The members of the staff of the Royal Hospital for Women report that they have been using ether all through, and have experienced no trouble. The Superintendent informs me that they buy large quantities of ether at a time (enough for about three months), so that they may have escaped a period when the questionable supply of ether was being manufactured.

A report from St. Vincent's Hospital informs me that no trouble from ether has arisen. The ether used at this hospital is foreign ether, and was purchased before the war.

Dr. Blackburn informs me that he purchased a few bottles of ether from a certain source. He did not use it for anæsthetic purposes on account of its objectionable smell.

Dr. Fairfax has kindly informed me of the following: For a considerable time before the beginning of the war, and during the earliest months of the war, he used a foreign brand of ether. When his stock of this gave out during the early months of this year, he started to use a certain brand of ether. He noticed at once that there were marked signs of respiratory tract irritation, and there was also a marked tendency to respiratory failure during the administration of the anæsthetic. This was most noticeable in two of Dr. Thring's patients and one of Sir Herbert Maitland's. On changing the brand again these troubles vanished.

Dr. Macpherson has kindly handed me the following notes, which are of interest:—

7. Female, aged 35, was operated on by Dr. Foreman on April 7, 1915. Eighteen months previously she had been operated upon at Dubbo. An ovarian cyst and the appendix had been removed. The general condition was apparently normal. The operation consisted in uterine curettage, and the removal of piles. The tubes, ovaries and uterus were also removed. While the uterus was being removed, respiration suddenly ceased, the mask having been removed for a minute or two previously. The colour was perfectly good, the pupils not dilated, and the pulse good. Twice previously during the anæsthetic the patient had become somewhat cyanosed. Artificial respiration was kept up for nearly two hours; for about an hour the heart continued to beat. After a little time, the colour became ashy grey, and, later on, there was cyanosis. Almost every expedient was tried to restore respiration, without the least effect, and the patient finally passed away. The operation had lasted $2\frac{3}{4}$ hours. Ether was administered by the open method, without any previous medication. The ether, Dr. Macpherson remarks, gave out an extraordinary pungent and irritating odour, so often noticed about that time.

On looking into this case, it appears to me to be absolutely unlike an ether death. Pure respiratory failure takes place during ether anæsthesia from one of three causes: (1) Surgical shock, causing reflex respiratory failure. This condition is rare, and, as far as is known, only occurs during the earlier stages of an operation and is most unlikely to occur after such a long time. We also know that the operation of hysterectomy causes little or no shock. This condition is generally easily recovered from. (2) Obstruction of the air passages from any cause. This can be at once discarded on considering the case. (3) Toxic overdose. On carefully considering the case, I think that we can exclude this for the reasons already enumerated.

Dr. Darling has handed me the notes of the following case of respiratory failure, which took place while he was operating on August 15, 1915:—

8. Male, aged 37, spare, suffering from pyloric ulcer, with a history of pain and vomiting of $2\frac{1}{2}$ years' duration. When the patient entered the theatre he was apparently not nervous. The heart and lungs appeared to be normal. Anæsthesia was induced with about one drachm of chloroform, followed by ether given by the open method. About 15 minutes after the anæsthetic had been started, the incision was made, while the patient was under light surgical anæsthesia. Shortly after, the patient stopped breathing; the pupils were small and the pulse continued to beat well. The airway was free, and artificial respiration had to be resorted to. This had to be continued for about 35 minutes before normal respiration was restored. During the whole time the circulation remained good. Ten minutes after the commencement of voluntary breathing, the anæsthesia was continued, and Dr. Darling com-

pleted his operation of a posterior gastro-enterostomy. No further trouble was experienced.

To my mind, this condition was one of respiratory shock, *i.e.*, reflex arrest of respiration from the commencement of surgical procedures during partially-established anaesthesia. The patient would not be a very robust one after his history of continued vomiting, and I think that his general ill health would account for the severity of the condition. I do not consider the ether to blame in the least. For, if it had been, further anaesthesia with the same ether would have precipitated the same symptoms with, I think, most unfortunate results.

Dr. Brierley reports that a patient died at the North Shore Hospital.

9. The case was that of a female with a degenerated fibroid, who had lost a large quantity of blood. She was in a very critical condition, and death was quite likely to occur under the anaesthetic. She died soon after the anaesthetic, from combined cardiac and respiratory failure, and he does not think that the ether was in any way to blame.

A doctor in the Western Suburbs informs me that in a case in which death occurred while ether was being administered, the cause of death was respiratory failure. I have no further notes of this case than that the operation was a big one, and that the patient was a middle-aged female, in fair health.

My own experience may be summarized as follows: Up to the early months of the present year, no difficulty was experienced. I then began to notice that there was a great tendency to irritative symptoms. Nearly every patient would start coughing on the smallest quantities of ether being administered. This was also noticed by Dr. MacLaurin. To test if it was the ether that was the cause of the trouble, two inhalers were taken of identically the same make. The one was filled with ether then in use and the other with another brand of ether. Coughing commenced in a very few seconds after applying the former, so that the indicator could not be advanced at all without causing the condition to get worse. The inhalers were then quickly changed, with the indicators at the same numbers. Within a very few seconds the coughing ceased and the anaesthesia proceeded on the even tenor of its way. This was done in two cases, with the same result.

As soon as other makes of ether were used these symptoms disappeared.

The following case is of interest:—

10. Male, aged 50, normal. Dr. Morton performed the operation of removal of a cartilage of the knee. Ether was administered throughout by the open method. Some little time after the anaesthetic had been administered, the patient commenced to show signs of the breathing becoming shallow; there was no sign of cyanosis. In fact, the man was suffering from nothing else but pure respiratory failure, for the heart and pulse remained normal throughout. This became so noticeable that the inhaler was emptied of ether and the patient made to rebreathe and so stimulate his respiratory centre with CO₂. As long as his centre for respiration was being flogged with CO₂, he was fairly right, but as soon as the CO₂ was

reduced to normal in his blood, respiratory failure started to take place. I might say that the re-breathing was never allowed to produce any cyanosis. This condition of respiratory failure lasted until nearly every superficial reflex had returned.

During a period of about a fortnight or three weeks, I had three or four cases in which there was a marked tendency to respiratory failure. On this account I felt extremely uncomfortable when giving ether. In one case in which Dr. Foreman did shortening of the round ligaments, the patient was very collapsed directly after the anaesthetic, but rallied in about a quarter of an hour. This should not have been so, as she was a fairly strong woman, about 28 years of age. The trouble with anaesthetics was so worrying that for a short time I gave up using ether, and went back to chloroform. There were rumours going about that the ether was at fault, so I tried other brands, and since changing I had no trouble at all. At first I was inclined to blame myself or think it was my bad luck, as I had used the same brand of ether for so long, and found it satisfactory. It had not occurred to me that the ether was responsible.

On taking the deaths under ether that I know of, and those statistics submitted to me by the Deputy Registrar-General, we find the following: During the month of February there was one death. From February to March 30 there were none. From March 30 to the end of April there were six. During the month of May there were two. In June and July there were none. That is, during a period of eight weeks, commencing from March 30 to about May 28 there were eight deaths under ether, while, during the months of February, March (30 and 31 excluded), June and July there was only one death from ether in the 17 weeks.

I am informed that the doubtful sample of ether referred to above was used in seven out of the eight cases in which death occurred. I believe the same ether was used in the eighth case.

It was during this period of April and May that the previously mentioned phenomena of respiratory irritation and respiratory failure were noticed by the doctors already mentioned.

From the foregoing facts we can deduce the following:—

(1) That the ether on the market up to March, 1915, was satisfactory.

(2) That from March onwards for some time a batch of ether was distributed which was not satisfactory, and that it contained some irritant to the respiratory tract.

(3) That during the time this ether was being administered, there was a great tendency to respiratory failure in numerous cases.

(4) That in two cases where careful notes were taken and careful observations made, the deaths under ether in no way resembled the ordinary ether death, for, as Hewitt says: "The all-important point concerning respiratory failure in moderately healthy patients under ether is that, however such failure may arise, the circulation at the moment when breathing ceases is sufficiently satisfactory for remedial measures to be almost invariably successful."

(5) That the ether now offered for sale is apparently satisfactory, as no bad results have been experienced recently at the Sydney Hospital, nor at the Royal Hospital for Women.

Reviews.

CANCER.

The nature of malignant disease, its cause and the factors which determine the variety of its manifestations are closed chapters in medicine. Much, too much, has been written speculatively on these subjects; and yet we are not appreciably nearer a solution of the problems involved. Alleged studies have been entered upon, and deductions have been drawn from suppositious facts and on false premises. Imagination has been called to the assistance of the authors, and the most fatal mistakes of all has been indulged in; an improbable theory has been utilized as the basis for a method of treatment with results which have satisfied the author that the theory has been proved. Unfortunately no one else has been convinced. In *Cancer, its Cause, and Treatment*,¹ we have a type of this form of reasoning. The author starts out with a bias. He is convinced; indeed he admits that he has been convinced for years, that cancer is a derangement of metabolism. He comes to this conclusion partly by exclusion. It is not a parasitic disease; it is not contagious; it is not appreciably hereditary; occupation does not exercise any marked influence on its occurrence; and lastly, cancer is not exclusively a disease of old age. He cannot imagine any other cause than that the food metabolism is disturbed. In the next place, he sets out to show that the frequency of the disease varies according to different conditions of life, and that it is more common among those who indulge in good living than in the more frugal. He quotes largely from statistics, and uses those figures which lend themselves to the purpose of proving that a diet rich in meat and other animal proteins, tea, coffee and the like produce this disease. Exception must be taken to the selective manner in which this part of the book is compiled. The work of those who have recorded facts without attempting to prove any preconceived theory is largely ignored, while throughout the book long citations from the opinions of clinicians, pathologists and others are quoted in support of this view. We are disinclined to listen to abstract opinions of even the most eminent, unless these opinions are supported by scientifically demonstrated facts. In the chapter dealing with the metabolism of cancer, we have searched in vain for any scientific records. The author talks about the number of erythrocytes and leucocytes, and makes statements such as that "albuminous constituents predominate in cancer tissue . . . and sugar forming substances abound." These statements are wholly misleading, since they teach us nothing about the metabolism of cancer. He does not mention the work of Freund, which has thrown some light on the bio-chemistry of malignant disease. He announces that he has found the saliva of cancer patients acid on numerous occasions. He does not deign to inform the reader what the degree of this alleged acidity is, nor to what it is due.

Having failed to bring any scientific argument to the support of his theory, he proceeds contentedly to the aspect described by him as medical. The sum of these chapters amounts to some extraordinary statements. Having persuaded himself that cancer is produced by errors in diet, and that the logical deduction from this conclusion is that it could be cured by placing the patients on a strict vegetarian and "hygienic" diet, he speaks of his clinical experience. He has dealt with 744 cases of malignant neoplasms. Of these 96 were carcinomata. Later he admits that some were benign. From the brief histories given, it appears that with but few exceptions, none of the tumours were examined histologically, and we may therefore assume that the total number of real carcinomata is materially less than the originally 96. Then comes the "convincing evidence" in favour of his theory. Case after case of can-

cer has been cured by dieting. *Mirabile dictu!* The tumours disappeared as a result of the withdrawal of meat, tea, coffee, and alcohol! More than that. The tumours did not re-appear. Dr. Bulkley has indeed a wonderful imagination. Unfortunately other authors have persuaded themselves that this can be effected, and we fear that the future will produce yet others who will hold the same opinion. Honestly!

University Intelligence.

ADELAIDE UNIVERSITY.

(By Our Special Correspondent.)

Dr. J. C. Verco has resigned his position as Lecturer in Medicine at the Adelaide University. This is a great loss to the University, especially at the present juncture. Efforts were made to induce him to reconsider his determination, but without avail. Dr. Verco has held the position for nearly 30 years, and has placed many generations of students under a debt to him by the lucidity and thoroughness of his lectures. The Faculty of Medicine have nominated Dr. H. Swift, Senior Physician at the Adelaide Hospital, to succeed him. Dr. Verco is leaving for a two months' holiday at Robe.

Professor Watson has been granted six months' further leave of absence, to enable him to remain in active service at the front. Dr. Kellaway, who has been acting in his place for several months, had just accepted a commission when news was received from Professor Watson. Applications for a temporary Professor of Anatomy are being invited from Melbourne and Sydney.

A medical student has again been selected Rhodes Scholar, this year in the person of Mr. H. L. Rayner. Mr. Rayner has had a brilliant career at school, both on the scholastic and the athletic side. He was first on the list of first year students in Medicine this year.

UNIVERSITY OF SYDNEY.

At the invitation of Sir Thomas Anderson Stuart, the Dean of the Faculty of Medicine, the members of the Workers' Educational Association, under the leadership of Mr. Meredith Atkinson, M.A., visited the Medical School of the University of Sydney on December 7, 1915. On their arrival, Sir Thomas gave them an account of the foundation, building and growth of the School of Medicine. The lecturette was illustrated by numerous lantern slides. The visitors then passed through the different laboratories, where a number of demonstrations were arranged. The manufacture of chloroform from alcohol and bleaching powder showed how economic conditions enforce the use of a method which had largely passed out of use for commercial purposes. Acetone, which is used for the manufacture of chloroform in most parts of the world, is not available in New South Wales as a source of chloroform. The constituents of a pint of milk were shown separated from one another. The continuous distillation in vacuo of mercury was an object lesson as to how a process could be brought under control. A large series of operations used in separating the medicinally active principles of Australian plants introduced the visitors to the series of alkaloids separated in the laboratory of physiology by Dr. Petrie from the plants of genera *Duboisia*, *Strychnos*, *Solandra*, *Nicotiana* and *Atherospermum*. Another set of tests displayed the method of detecting cyanogenetic glucosides and the enzymes liberating prussic acid from Australian product plants. In the Department of Anatomy, a series of fine dissections by Dr. Potts were exhibited. A dissection of the base of the brain, prepared by taking away its osseous covering well deserved the attention paid to it. A preparation of the internal ear by clarification with oil of wintergreen, after injection with silver, showed the advantages of this method of preparation. In conclusion, Dr. Inglis gave a demonstration of pathological specimens with the pandiascope.

THE SCHLINK FUND.

Since the notice published in the issue of November 27, 1915, the only contribution to the Schlink Fund received has been a generous one from the Field Hospital at Liverpool Camp of £15 5s. The total now stands at £116 10s.

¹ *Cancer: Its Cause and Treatment*, by L. Duncan Bulkley, A.M., M.D., 1915. New York: Paul B. Hoeber, 8vo., pp. 230. Price, \$1.50 net.

The Medical Journal of Australia.

SATURDAY, DECEMBER 18, 1915.

Varicocele in its Military Aspect.

Nearly six months ago Dr. E. Scot Skirving invited the members of the medical profession to express an opinion in regard to the operation for varicocele. His invitation has not been accepted, save by two writers, who have dealt with side issues rather than with the fundamental question propounded by Dr. Scot Skirving. In the present issue, Dr. Flynn gives a masterly analysis of the knowledge possessed of varicocele, and, like the proverbial angel, treads cautiously and carefully on the quicksands of deduction. It is probable that the reason why the invitation found so little response until Dr. Flynn read his paper at a meeting of the New South Wales Branch of the British Medical Association was because everyone felt that it was almost impossible to speak definitely on the subject of the operation without leaving the realms of science and entering upon those of speculation.

Before it is reasonable to approach the problem of the circumstances under which an operation for the relief of symptoms caused by varicocele should be undertaken, it is necessary to consider the evidence of the significance of varicocele. Dr. Flynn has pointed out that it is a developmental defect, which usually, but not always, effects the left testicular organ. The persistence of the fetal condition of the veins and the consequent failure of the organ to undergo the changes at puberty essential for its full functional activity cannot be met by any form of operative treatment. On purely theoretical grounds, it must be recognized that artificial obliteration of the pampiniform veins after the period of adolescence has passed could only result in damage to an already imperfect organ. The time has gone by when surgeons claimed that an operation of this kind would restore the organ to a normal condition. Since the physiological activity of the seminiferous tubules of the unaffected testis suffices for procreative purposes, this aspect need not be discussed further.

Moreover, it is probable that the functional impairment of one organ produces an increased activity of its fellow. Of infinitely greater importance is the rôle played by the sexual gland in metabolism. Again it is necessary to approach the matter with considerable hesitation, and to avoid every semblance of dogmatism. Our knowledge of the nature and physiology of the hormones is so nebulous that it would be unwise when dealing with the probable effect of the loss of an endocrinous organ to do more than hazard a guess. In all probability a metabolic balance becomes established after puberty, when there is a developmental defect of one of the glands with internal secretion. This balance can, however, be disturbed, and it is reasonable to assume that the body may have some difficulty in re-establishing the balance after a gross trauma to the defective, albeit not quite functionless gland. Dr. Flynn has demonstrated that the effect of interference before puberty is likely to be of serious consequence to the individual. We would suggest that after puberty this interference cannot be immaterial. We therefore arrive, with Dr. Flynn, at the conclusion that an operation for the relief of symptoms due to varicocele should not be lightly undertaken.

The next question is what conditions are said to require the operation; whether they are of frequent occurrence, and whether other means do not exist to achieve the same or even better results. Dr. Scot Skirving referred to operations undertaken to meet the military requirements. The chain of symptoms produced by a large varicocele have been described by numerous surgeons, and are well known to all practitioners. It is known that they become increasingly distressing in tropical climates, and under conditions of severe muscular strain, especially when the subject retains the erect position for long periods. But there is very little evidence of the frequency of these symptoms. A perusal of the records of the medical services of great armies would rather suggest that, while a mild varicocele is common, one which produces suffering or marked inconvenience is relatively rare. If this be so, there would be no justification to require recruits to submit to the operation on this ground alone. The military authorities inform us that a

soldier afflicted with a varicocele may feign these symptoms to escape duty. Doubtless every army contains some malingerers, but we submit that the man who is inclined to malingering will find an excuse whether he has some developmental defect of his testicular organs or not. If there were some obscure relationship between varicocele and malingering, this affection would figure more largely among the disputed claims for compensation under the various schemes of national sickness insurance. It may therefore be said that the military authorities are perpetuating an untenable belief in support of this regulation. We are told that the soldier may be reduced to a state of acute suffering if he loses his suspensory bandage in the trenches. Surely the military authorities would find it a small matter to keep a supply of these articles for the uncommon eventuality that one might be lost. The man with a varicocele could be guaranteed a suspensory bandage under all conditions, without imposing an undue strain on the organization of the hospitals stores.

THE VICTORIAN BRANCH.

In last week's issue, an account of the annual meeting of the Victorian Branch of the British Medical Association was published. This record and the annual report of the Council are worthy of careful perusal. The Victorian Branch has evinced extraordinary activity, and has achieved much during the year which terminated on December 1, 1915. The skilful and diplomatic guidance of the Retiring President, Dr. Andrew Honman, has resulted in a measure of useful, coördinated work, unsurpassed in the annals of the Australian Branches of the Association. The Victorian members have benefitted to an unusual degree by the incessant watchfulness of their President and by the vast expenditure of energy well directed, with which he performed the duties of his office. The effect of his activities will not be limited to the term of his office nor to the boundaries of his Branch. In congratulating the new President on his unopposed election, we may sympathize with him that he is called upon to follow so arduous a worker as Dr. Honman.

The members discussed many highly important and interesting subjects after the adoption of the annual report. In the first place, the Retiring President, before he delivered his Address, called attention to the necessity for vigilance on the part of the medical profession. In Parliaments there have been Bills and rumours of Bills which give the members of the medical profession to think. During the past week the news of the passing of the amending Bill of the Health Act in Western Australia has been received. This Act and the Bill for the amendment of the Health Act in Victoria, which has been introduced into the Legislative Assembly, are both revolutionary in character, and are calculated to affect the public health to no small extent.

In regard to the attitude of the various legislative bodies throughout Australasia toward the medical profession, plain speaking is undoubtedly called for. We have drawn attention to the intolerable proposal, which has been made in New Zealand, to force doctors to consult with a registered practitioner, provided that a prescribed fee is forthcoming. The offensive tone adopted within the New South Wales Parliament by some members in regard to Aberdeen graduates when the Medical Practitioners Amendment Act was under discussion, and the unconcealed desire to bring about nationalization of hospitals and of the medical profession itself, are matters which must be opposed in the interests of the medical profession, as well as of those of the public. The legislators are fond of taunting the British Medical Association with being a well organized trade union. These taunts, coming from members of the Labour Party, are all the more unreasonable, since the Association has always been guided in its policy by a desire to safeguard the best interests of the community and to raise the dignity and efficiency of the medical profession. When open and sinister attacks on the well-being of the profession are delivered, it becomes imperative to increase the unity of the profession, in order that by the instrument of united action the public may learn that in things medical the best judges are the members of the medical profession.

THE MEDICAL PROFESSION IN AUSTRALIA.

From time to time members of the medical profession have been faced with a difficult question in regard to volunteering for active service. When a real need for medical men at the front existed, a considerable number of suitable practitioners were turned away, on occasions, we fear, with scant courtesy. The call for officers in the Royal Army Medical Corps and in the Australian Army Medical Corps was urgent and extensive, and it is with justifiable pride that the medical profession in the Commonwealth can look at the list of names of those who have given their time and skill in the service of Empire, when both were required. Months have passed by and numbers of men have left our shores in transports and hospital ships. We learn from several reliable sources that the position in Egypt and in the Mediterranean has undergone a marked change. While the profession is being depleted at an almost alarming extent at home, able and keen men in the A.A.M.C. are seeking something to do to pass the time. One medical officer of the No. 1 Australian General Hospital, writing to a medical friend, expressed his pleasure on learning that his friend was not coming out, at all events for a time. He pointed out that many of the medical officers were "tumbling over themselves," looking for work. He had charge of 150 beds, of which 50 were empty, and he expressed the opinion that they were likely to remain empty until after the winter. Toward the end of October very few severely wounded soldiers arrived at Mena. In regard to the position at Lemnos, it is said that some of the medical officers spend their time fishing and shooting. The only busy men at present appear to be the men holding special appointments in the stationary hospitals, or those attached to regiments.

It is somewhat disconcerting with this information to hand to receive official notifications calling on all men on the active lists and those in the reserve to declare whether they are prepared to proceed to the front at once or later, and if they are not so prepared to give their reasons. Many of the men on active service are doing most useful work at home. If these men were sent abroad before there was any real need, less able men would be called upon to perform the military duties which they are performing at present in a most satisfactory manner, and incidentally a second man would in all probability be required to carry out the civil work, which these men somehow or other find time to do. We could quote numerous instances of this kind, but, for the present, refrain from labouring the point. Since the military authority does not appear to take into consideration the effect which a continuous call on the profession must have on hospital and private practice within the Commonwealth, we feel impelled to urge members to delay for a time in offering their services to the Principal Medical Officers of the various Military Districts, unless they will go as reinforcements for field service. Later, when Mr. Hughes has raised his 50,000, their services will be required. The Department for Defence may rest assured that whatever may happen at home, there will not be a shortage of medical men

at the front. But there is no sense in sending more men forward than are actually required.

LODGE TROUBLE IN WELLINGTON, NEW ZEALAND.

For some time past the medical officers of the chief Friendly Society Lodges in Wellington, in New Zealand, have had cause for complaint in regard to the terms of their contracts. The medical contribution for the past 20 years has remained at the uniform figure of 15s. per member *per annum*. Of this the Lodge doctor gets 14s. Other conditions have also remained as they were, and the medical men have put in a demand for a complete revision of the contracts. The chief difficulty appears to be centred around the capitation fee. A claim for 24s. has been insisted on, on the ground that the amount of work entailed in the attendance of the member, his wife and children under 16 years of age, as well as on aged dependents is very considerable, that the cost of transit and the incidental expenses of practice at present are high, and that no comparison can reasonably be drawn between the requirements of twenty years ago and those of to-day. The Lodges hold the view that nothing has transpired to justify an alteration of the existing conditions of the contract. It has been put forward that with between 3000 and 4000 members to be attended by 17 or 18 lodge doctors, the old rate is reasonable, and that on this rate of payment the doctors are well paid for their services. It is unnecessary to discuss this matter, since no valid argument has been opposed to the doctors' reasonable demands. If Lodge practice is to be satisfactory to the members of the Friendly Societies, it is quite essential that sweating must be avoided, and that the conditions must be such as would enable the medical practitioners to devote the requisite time to each patient. The Wellington practitioners have determined to adopt an inflexible attitude, and since the Lodges do not show signs of relenting, it is probable that by the end of the year none of the Lodges will have the services of a medical practitioner. Some of the doctors have already severed their connexion with the Lodges at the end of November. The attitude of the Lodges is short-sighted, since a Lodge without a doctor is like Hamlet without the Prince of Denmark, and 6d. a week cannot be held to be an extravagant demand for looking after the health of an individual and those dependent on him.

THE CHIEF HEALTH OFFICER OF TASMANIA.

It has been announced that, owing to the fact that none of the applicants for the post of Chief Health Officer of Tasmania have possessed the essential Diploma of Public Health, the office should not be filled for the present. In order that the work may be carried out in a satisfactory manner until a permanent appointment can be made, the Federal Government has agreed to place the services of Dr. D. G. Robertson, one of the Quarantine Officers, at the disposal of the Tasmanian Government for a few months. Dr. Robertson will undertake the duties of the Chief Health Officer as well as those of the Quarantine Officer. It will be remembered that Dr. Elkington, of Brisbane, who is also an Officer in the Federal Quarantine Service, proceeded to Tasmania to confer with the State Government with regard to matters connected with the administration of the public health.

Abstracts from Current Medical Literature.

OPHTHALMOLOGY.

(215) Changes in the Visual Fields.

Posey records some unusual changes in the visual fields (*Archives of Ophthalmology*, September, 1915). The first case was that of a woman, aged 46, who was suddenly seized with headache and blurred vision. Examination showed loss of homonymous right upper quadrants, which persisted. Quadrant defects are rare. The author concludes that the lesion was in the left cuneus, probably from interstitial toxæmia. In a second case, the patient, a young woman, lost the whole of the right field of vision following an attack of left-sided headache, with loss of sensation and power of movement in the right arm and leg. Both sensation and motion returned, but the visual defect persisted, except for a small island of sight in the outer part of the left field. A review of the literature shows that migraine may be the exciting cause of organic brain disease, which may show itself by paralysis, aphasia or hemianopsia. He refers to a third case, which he published 20 years ago. This was an instance of visual hallucination in the blind area in a migrainous subject. The patient saw a large blue eye, the size of a bull's, in the dark area of the field of vision. The fourth and fifth cases were produced by occlusion of the cerebral arteries, and the sixth was a case of one-sided hemianopsia, due to nerve atrophy from pressure by a sclerosed vessel, probably the ophthalmic artery. In his seventh case there was a rare lesion in the fields, a hemianopic defect confined to the macular regions. A man of 56, suffering from rheumatoid arthritis had an attack of dizziness and confusion of mind and speech and disturbance of vision. These symptoms soon cleared up, except a difficulty in reading from type. Functional examination of the eyes showed them to be normal in all respects, save for loss of vision in the right side of each macula. Wilbrand, in 1907, reported eight cases, and gave a detailed analysis of the condition. It is probably due to a blocking up of the calcarine artery, which runs in a deep fissure on the median side of the occipital lobe.

(216) The Operative Treatment of Ptosis.

Machek describes an operation for the cure of ptosis (*Archives of Ophthalmology*, September, 1915). It consists in fixing the lids to the eyebrow by two narrow, short flaps of the skin of the lid, which are passed subcutaneously on each side towards the eyebrow. Two parallel incisions are made along the edge of the lid, the first 6 mm. from the margin and the second 5 mm. higher than the first. The strip of skin between the two incisions is divided in the middle, and

each half directed up to its base. At each end of the bare area a double-cutting, pointed knife is introduced between the skin of the lid and emerges in the eyebrow. In these two canals a grooved director is introduced. A double-needled suture is passed through each flap, and draws them up the canal. The flaps are fixed to the brow. It is not necessary to close the original wound with sutures. The epidermis on the submerged skin flaps can be removed by scraping them mildly.

(217) Chronic Serpiginous Ulceration of the Cornea.

M. S. Mayou describes Mooren's ulcer as a chronic ulcer with a serpiginous outline, usually starting at the corneal margin in the region of the palpebral fissure. It involves the whole cornea as a rule (*The Ophthalmoscope*, September, 1915). The spreading margin is deeply undermined; there is no discharge and no ciliary injection, unless pyogenic bacteria are present. Healing takes place behind the spreading edge, but as no new fibrous tissue is formed, there may be loss of half of the thickness of the cornea. For the same reason only slight opacity may result, and the vision may be comparatively good. Recurrence of the ulceration occurs at times. It has been stated that this condition is a form of rodent ulcer; the author holds that this view has now been abandoned. Andrade described a bacillus which he considered to be the cause. His results, however, have not been confirmed. The author holds the view that the disease is a necrotic process of the superficial layers of the *substantia propria*, due to defective nutrition. In some cases signs of degeneration and hyaline thrombi have been found in the anterior ciliary vessels, which supply the anterior layer of the cornea. The treatment is highly unsatisfactory. In a case detailed by the author, carbolic acid and cautery were applied for a month without effect. Paracentesis was then performed, the aqueous being evacuated daily for three weeks. Teeth were removed on account of pyorrhœa, and, two months later, paracentesis was again performed. The ulcer ultimately healed.

(218) Brawny Scleritis.

W. Gilbert describes a case of brawny scleritis in a woman, aged 76 years (*Archives of Ophthalmology*, September, 1915). She had been suffering from gout when she was taken ill with a severe inflammation of the left eye. The conjunctiva protruded over the cornea, like a gelatinous ridge, and covered over a bulging of the sclera. The cornea was opaque and vascular, and the pain necessitated the removal of the eye. The anatomical conditions corresponded to those described in this condition. Since the aetiological importance of gout in his case could not be doubted, the author describes the changes, including the necrosis in the sclera, in some detail. Giant cells have been found in the

granulation tissue of old gouty nodules. The author regards the fact that the necrotic changes and giant cells found in brawny scleritis are identical to those of gout, as evidence of the gouty nature of the condition, when tuberculosis and lues can be excluded. He states that the case is the first one recorded in which gout can be shown definitely to be the cause.

(219) Blastomycetic Infections of the Eyelid.

Fagan analyses the records of six cases of blastomycetic infections of the eyelids observed in Memphis (*The Ophthalmoscope*, September, 1915). Five of the six patients were coloured men. He finds that the lesion begins as a papule, and soon changes to a pustule. This extends at the edges, forming a flattened mass, with irregular elevations, between which pus oozes on pressure. The causal organism is a budding, yeast-like fungus, the *blastomycete*. It usually attacks the skin, but has been known to infect the lungs, liver, kidney and bone. Mucous membranes and the conjunctiva appear to be immune. In 25% of the lesions the affection started in the eyelids. Fagan has removed warty masses five times in one patient under his care, but has found that they always recurred. When treated with X-rays and 300 drops of a saturated solution of potassium iodide each day, the condition cleared up. The organism was discovered by Gilbert in 1894. Bevan has recommended giving up to 150 grains of potassium iodide three times a day.

(220) Infection after Operation for Glaucoma.

Harrison Butler complains of an epidemic of cases of late infection after operation for glaucoma (*The Ophthalmoscope*, August, 1915). He divides the cases into three groups: 1. Acute cases, ending in panophthalmitis and enucleation. 2. Severe iridocyclitis, destroying the sight. 3. Mild iritis, and local inflammation around the aperture. Recovery follows in cases of the lastnamed group.

1. Acute cases.—The first case affected a man of 36 years with heterochromic cyclitis and cataract. The cataract was successfully extracted, but a year later glaucoma developed. The eye was trephined below, and healed up well, though keratitis punctata was always present. Five years later the man returned with panophthalmitis, and the eye was removed. The second case was that of a woman, aged 55, who had Holth's punch operation with iridectomy performed for chronic glaucoma. The vision improved. Filtration, without a large bleb, was established. Fifteen months afterwards panophthalmitis developed. In a third case the punch operation was performed, and fourteen months later the eye became acutely infected, and had to be removed.

2. Sub-acute case.—In his one instance of sub-acute infection the

punch operation was performed under ether. Four months later the patient was stung by a wasp. Redness of the eye and iritis resulted.

3. Slight Cases.—This group includes four cases, in all of which the punch operation had been performed. After an interval varying from five months to a year each eye became inflamed, but the process was arrested more or less by treatment. The author concludes that late infection is a peril which hangs over every eye possessing a filtering cicatrix, of every type, however obtained. Button-holing the conjunctival flap adds to the risk.

(221) Telephone Attachment in Eye Surgery.

Mackenzie Davidson hopes that by means of a telephonic attachment non-magnetic particles may be extracted from the eye (*The Ophthalmoscope*, September, 1915). Working from a suggestion by Graham Bell, he discovered that a plate of carbon was the best material for the indifferent electrode, and that a distinct sound could be elicited whether the metal sought was lead, nickel, copper, iron, or iron alloys used in shell manufacture, or whether the surgeon's instruments were steel, silver or nickel-plated. The skin of the patient is moistened with a solution of salt, and the carbon plate fixed in position by a bandage. One end of the telephone wire is attached to the plate, and the other is fixed to the receiver. When contact is made with a foreign body, a buzz or crepitation is distinctly heard. R. R. Cruise used the appliance in the case of a patient in whose right eye a piece of metal 2 mm. in length was seen by X-rays. The metal was situated close to the sclerotic, 12 mm. below the centre of the cornea in the lower nasal quadrant. The particle was non-magnetic. The needle attached to the telephone was inserted over the site of the particle, and a characteristic crepitation was heard. An incision was made with a Graefe knife, when the sound was again heard. The attempt to extract with forceps failed.

LARYNGOLOGY AND OTOTOLOGY.

(222) Curettage of the Eustachian Tube.

Sidney Yankauer suggested in 1910 the treatment of chronic otorrhœa by curetting the Eustachian tube. The suggestion did not meet at once with approval, and the objection raised was that by closing the tube its functions would be destroyed. In order to ascertain the value of the operation, the author has addressed an enquiry to 6000 otologists, and records the results in the *Laryngoscope* of October, 1915. He found that 119 surgeons have performed the operation in all 735 times. In 609 instances, i.e., 83%, the Eustachian tube was successfully closed. Cure of the otorrhœa was effected in 51.5%. In 36% the closure followed a single curetting. The hearing was improved in 46%, unimproved in 50% and made worse in 4%. He deduces from these

figures that the hearing was improved in 90% of the cases in which the discharge was stopped. Tinnitus was present in 36% of the cases. It was lessened in 52%, unchanged 42%, and made worse in 5%. He therefore concludes that the closure of the tube has a decidedly beneficial effect upon the suppuration, the tinnitus and the auditory function. He meets the objection raised against the operation by claiming that in otitis media the Eustachian tube is perverted and has permanently lost its functions. He maintains that the Eustachian tube does not act as a drainage tube. Moreover, when the otitis is cured, there is no pus to drain away at all. He claims that the investigation has proved that closure of the Eustachian tube by curetting it through an intact auditory meatus does not cause any loss of function, which has not already been permanently destroyed; that, by its closure, reinfection from the fauces can be prevented; and that it should be performed in all cases of otorrhœa. Where it does not effect a cure it may improve the hearing sufficiently to render the chances of permanent cure after radical operation considerably better.

(223) Gun-Shot Wounds of the Larynx.

L. Boehler (*Surg., Gynaec. and Obstet.*, September, 1915) publishes the details of a series of cases of bullet wounds affecting the larynx of soldiers in the Austrian Army. In the first case the bullet passed transversely through the larynx. There was emphysema of the skin from the edge of the scalp to the level of the nipple. The soldier was very dyspnoic and cyanotic. Tracheotomy was performed, and on the following day the emphysema was relieved. He died on the third day. In the second case there was a very small entrance wound in the right shoulder, but no exit wound. Emphysema extended from the scalp to the axillæ and across the thorax. The eyes were closed. The lower jaw could not be distinguished, and the skin lay in massive folds in front of the ears. There was dyspnoea and cyanosis. The former improved after incisions were made through the emphysematous skin. The cartilage on the right side was found to be perforated, and a flap about one centimetre square protruded into the cavity. The flap was sutured and tracheotomy performed. The author presumes that the bullet was coughed out. The patient made a good recovery. The third patient received a bullet wound through the larynx four days before he was found. The entrance wound was much soiled. The patient was weak; there was difficulty in breathing and in swallowing. An operation was performed on the field; an abscess cavity was found in a deep situation and drained. The man recovered. The last case was that of a soldier who was hit by a bullet at the level of the incisura thyroidea almost in the middle line, two hours before he was seen. The bullet had left a large exit wound in the right posterior axillary line. The pa-

tient was coughing up foamy, bright red blood. There was not much dyspnoea. There were marked signs of shock, but no laryngeal symptoms. He died three hours later. The author also gives details of laryngeal injuries discovered in dead soldiers. In nearly every case of severe gunshot wounds involving the larynx, the patients die before they are brought into hospital. Tracheotomy is required when the soldier has to be transported in rough carts over bad roads. If the point of entry through the cartilage is small, a dose of morphine and rest may suffice to remove the difficulty in breathing.

(224) Spindle-Cell Sarcoma of the Nasal Pharynx.

H. B. Orton (*The Laryngoscope*, October, 1915) reports the case of a man, aged 50, who complained that he could not breathe through the left nostril, and that he had pain in the left ear. The patient had lost weight. On examination, a growth about the size of a hazel nut was found to block the choana on the left side. A portion was removed for examination, and proved to be a small, spindle-celled sarcoma. The entire vault of the naso-pharynx was curetted. The patient remained free from pain for about eight weeks, when this symptom recurred in the left ear, over the tip of the mastoid, in the occipital region, and on the top of the head. A month later the growth was seen on the anterior wall of the sphenoid. As the patient would not agree to any further operative treatment, Coley's serum was injected into the pectoral region. The pain disappeared, but returned at a later date. He was then admitted into hospital, and the serum applied daily. The growth within the nose disappeared, and the gland in the neck became smaller.

(225) Foreign Bodies in Larynx and Pharynx.

T. Mc. S. Barrett reports the case of a negro patient, aged 40, a deaf mute, who was admitted to the Dixmont Hospital after having committed murder while under a delusion of persecution (*Journ. Amer. Med. Assoc.*, September 18, 1915). The case was a typical one of the precocious form of paranoia. The patient was suffering from chronic nephritis, pericarditis, and valvular disease of the heart. The Wassermann test was negative. The patient worked until three weeks before his death, when he was disabled with rheumatism. He was seized with symptoms similar to those of acute gastritis, and died three days later. After death a brass key 2 inches long was found in the larynx, and an eye screw, 1½ inches long was found in the right anterior corner of the pharynx. Both articles were wrapped up in cloth, which was decayed and foul smelling. The author assumes that they had been in position for at least three weeks. He suggests that he sought to conceal them in view of their possible utility, and had intended when necessary to recover them by regurgitation.

British Medical Association News.

SCIENTIFIC.

Ether Anæsthesia.

At a meeting of the New South Wales Branch held on July 30, 1915, Dr. W. J. Stewart McKay read a paper on "Impurities of Anæsthetic Ether." He pointed out that three deaths had occurred after the administration of ether at one of the large metropolitan hospitals, and a fourth death at a suburban hospital. These deaths gave rise to a scare among some of the anæsthetists, and the brand of ether which had been used was discontinued and another substituted. After dealing in general terms with the rumours which were prevalent at the time, he referred to an article on anæsthetic ether by Finnemore, which had been published in the *Proceedings of the Royal Society of Medicine*. According to this author, the impurities found in commercial ether may be traced to the source from which the ether was derived or to decomposition during the process of keeping. Rectified spirit contributed alcohol and water, while methylated spirit contributed alcohol, water, a small quantity of acetone. The impurities formed on keeping included peroxides, aldehydes and acids. A certain quantity of alcohol in ether would be beneficial in that it acted as a retarding agent to the oxidizing changes that pure ether undergoes spontaneously. Finnemore had come to the conclusion that water could act as a preservative, by producing small quantities of alcohol by hydrolysis. The presence of acetone could be regarded as strong presumptive evidence of the manufacture of ether from methylated spirit. Its presence could be detected by the nitro-prusside test. The first product of decomposition of ether probably consisted of hydrogen and ethyl peroxides. The peroxides were formed by the action of air and sunlight, and, consequently, it was necessary to keep ether in the dark. The old British Pharmacopœial test was not stringent enough, not because 0.25 mgr. of peroxide of hydrogen in 20 c.cm. of ether was a dangerous amount, but because ether containing this quantity of peroxide would certainly contain sufficient aldehyde to render it very irritating. The test prescribed in the new edition of the pharmacopœia was much more searching. A freshly distilled ether might comply with this test, but the same ether kept for a month would probably be found deficient. Finnemore used a test which consisted in mixing ether with a solution of vanadic acid. In the presence of peroxides the green colour of the solution was changed to brown or red, according to the concentration.

Aldehyde in ether was usually in the form of acetaldehyde. This substance possessed a suffocating odour. It was invariably present in ether that had begun to be decomposed. Its presence and amount were important factors in determining whether the sample was suitable for anæsthetic purposes. The new pharmacopœial test consisted in keeping the ether in contact with freshly broken potassium hydroxide in a bottle for an hour. The German pharmacopœia laid down the same test, but specified the time at six hours. Dr. Stewart McKay stated that his attention had been called to a very offensive odour in the operating theatre after use of ether. The odour was more pronounced than it used to be. Of the acids formed on the oxidation of acetaldehyde and other aldehydes, acetic acid was the most common. The acids could be detected by noting the reaction of the residue or by testing the reaction of water after the ether had been shaken up with it. When an ether gave an acid reaction it should be refused for anæsthetic purpose, since the presence of acid was a sure sign that decomposition had taken place.

Dr. Stewart McKay proceeded to read a report on a certain brand of ether, in which it was set out that no impurities had been detected. In conclusion, he stated that peroxides formed in ether in the presence of air and sunshine, and, consequently, the rule should be laid down that anæsthetic ether should be kept in coloured bottles, which should not be left half filled. The longer an ether was kept the more likely was it that aldehydes would be formed, and therefore there was a distinct advantage in obtaining locally-manufactured ether, provided it was pure.

All imported ethers must, of necessity, be several months old before they were used.

Dr. Mark C. Lidwill opened the discussion by stating that up to a short time before the ether which was procurable in Sydney was quite satisfactory. Shortly after the outbreak of war, instances of respiratory failure during ether anæsthesia were noted with comparative frequency. On this occurrence he gave up using ether, and substituted chloroform for it. Several deaths took place under ether, including one in a patient who was suffering from exophthalmic goitre. On analysis, it was found that the ether did not contain any paraldehyde, any peroxide or any acetic acid. He expressed the opinion that the inclusion of paraldehyde or acetic acid in ether was of little actual consequence, in so far as these substances were concerned. They indicated, however, that the ether was not pure. Anæsthetic ether should not contain any alcohol.

Dr. H. G. Chapman said that some months previously he had been asked to examine the ether used at the Royal Prince Alfred Hospital, because there had been a number of deaths under anæsthetics at the hospital. In all, eight deaths had occurred, but in three the anæsthetic could not be held responsible. There had therefore been five deaths which had been attributed to the ether. Another death had occurred a week before. The ether which he had tested was quite satisfactory in so far as the chemical analysis was concerned. No impurity had been detected. He had looked up the literature on this subject, and had found that 20 years ago some difficulty had been experienced. The matter had been investigated by Sir William Ramsay, and it was interesting to note that the requirements of the new edition of the British Pharmacopœia corresponded to Ramsay's recommendation.

Dr. Chapman emphasized the fact that none of the recognized impurities of ether were markedly toxic bodies. The aldehydes, peroxides and acids were more or less harmless. But when an ether was free from these substances it was probably also free from other substances which might be associated with the aldehyde and other regular impurities, but which were not detectable by ordinary means.

He then turned his attention to the pharmacological and chemical investigation of different samples of ether. In the analysis of the sample in question, the first distillate came over in the fractionating apparatus at a remarkably low temperature. According to the British Pharmacopœia, the first distillate should come over at 34.5° C. The ether in question started to distil at 31° C. and 20% of it was recovered before 33° had been reached. He obtained a considerable quantity of an early distillate of the ether. He had subjected 300 c.cm. to an analysis which, however, was not yet completed. A small residue was found in the still after the ether had been driven off. Dr. Chapman turned his attention to certain sulphonic derivatives, many of which were highly toxic substitutes. These bodies arose as a result of an interaction between alcohol and sulphuric acid. They had a high boiling point. He pointed out that substances with a high boiling point were volatilized to some extent when substances of a low boiling point were distilled. For example, when an ethereal solution of nicotine was distilled traces of the latter were carried over with the ether. It was therefore possible that sulphonic derivatives might be carried over in the process of preparing anæsthetic ether. In conclusion, he maintained that pure ether was a safe anæsthetic, while chloroform was not.

Sir Herbert Maitland pointed out that Dr. Stewart McKay had stated that there was a scare in regard to ether. Dr. Lidwill's and Dr. Chapman's contributions to the discussion would increase the uneasiness. He held that experience was worth a great deal more than chemical analysis. None of his patients either in hospital or in private had had the slightest symptom which had caused him anxiety. He hoped that his experience would counteract the scare to some extent. He was of opinion that there could not be very much the matter with the ether on the market.

Dr. E. H. Binney asked for information in regard to the symptoms of the patients who had died.

Dr. Brady wished to know whether any other anæsthetic in addition to the ether was given in the fatal cases.

Dr. Fourness Barrington supported Sir Herbert Maitland in his contention that the ether used at the Royal Prince Alfred Hospital was quite safe.

Dr. Ritchie had not noticed any bad effects when using ether. He held the opinion that it was very difficult to induce patients to start breathing again after respiration stopped during ether anaesthesia. He enquired whether any of the patients had had an injection of morphine and atropin prior to the anaesthesia. The result of morphine might be delayed for a considerable time.

Dr. F. Guy Griffiths enquired whether the ether in the fatal cases had been administered by the open or closed method. He thought it would be necessary that full details should be given of all the fatal cases that had occurred. He suggested that Dr. Lidwill be asked to make an investigation and to communicate the result to a subsequent meeting of the Branch.

Before Dr. Stewart McKay replied, Dr. Lidwill explained that the patients became pale, the respiration became feeble, the blood pressure fell, the respiration ceased and the patients died. He was unable to give any reliable information in regard to whether another anaesthetic was used in some of the cases. In a few ether alone was used. In the majority of cases the open method was used. No morphine and atropine had been injected.

Dr. Stewart McKay's reply was brief.

A meeting of the New South Wales Branch was held at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on November 12, 1915, Dr. George Armstrong, the President, in the chair.

Dr. Mark C. Lidwill read a paper on a review and investigation as to the cause of recent cases of anaesthetic poisoning (see page 578).

Dr. H. G. Chapman wished to insist that the only means suitable for the detection of impurities in ether were chemical. He reminded members that chemical tests alone were prescribed in the Pharmacopœia.

He dealt with the pharmacology of ether. Ether itself could not be held responsible for the deaths that had occurred, since it could be shown that it very rarely caused death if the respiration failed, while chloroform caused death not infrequently. He had been told that this was not in accordance with the views of anaesthetists. He had looked up the point and had found that the evidence supported his contention. The ether he had analysed was free from all usual impurities, but it contained a body which distilled at a lower temperature than pure ether. In the more recent samples of ether no trace of this particular body had been found. He had compared the brand of ether which had been given to him for analysis with various other ethers. One of the brands on the market contained alcohol and aldehyde.

Dr. Chapman proceeded to demonstrate the apparatus used in the analysis of ether. He had distilled 250 c.cm. of this ether in this apparatus. The thermometer in the upper part of the still showed the temperature at which the ether distilled. This temperature was constant at 33.2° C. In the British pharmacopœia it was set forth that ether should not distil under 34.5° C. He was satisfied, however, that the substance distilling was ethyl ether.

He called attention to the test for aldehydes and those for peroxides. The sample submitted from the Royal Prince Alfred Hospital gave the usual yellow colour indicating aldehydes. When sulphuric acid and potassium bichromate was added to ether containing peroxide, a blue or violet colour developed in the ether. He showed a tube in which the colour had developed in the testing fluid. Professor Schofield had pointed out to him that this reaction was due to aldehyde and not to peroxide.

Pure ether should evaporate without residue. The sample in question left a considerable residue in the form of an oily fluid. Unfortunately, he had not been able to obtain a sufficient quantity of this substance to complete its chemical analysis. It was an organic body, and possessed a high boiling point, as it did not volatilize at 100° C. It was possible that it was derived from the alcohol used in the manufacture of ether. An alcohol largely used in the preparation of anaesthetic ether contains fusel oil (amyl alcohol), which was derived not from sugar, but from leucin. Dr. Chapman recalled the fact that about 30 years before some of the ether on the market had contained fusel oil,

and that anaesthetists had regarded it as too dangerous for use. The pungent odour which had been noticed in the ether during the period of the accidents might have been due to derivations of fusel oil. The discussion had led to a very marked improvement in the ether on the market.

Dr. Stewart McKay spoke in defence of the ether which had been incriminated. All the analyses had yielded negative results, and none of the impurities enumerated in the British Pharmacopœia had been discovered. It was stated that some undiscovered impurity was present in the ether. He did not believe in this theoretical body, and he did not believe that there had been any cause for alarm. He had not experienced an accident with the brand of ether in question. He maintained that the clinical experience of Sir Herbert Maitland, of Dr. Jenkins, of Dr. Corbin, and of other surgeons proved that the ether was safe. He instanced a case in which a patient who was undergoing an operation for cancer of the jaw had stopped breathing during ether anaesthesia. Tracheotomy was performed, and a blood clot was removed from the air passages. Had this not been discovered and death ensued, it would doubtless have been attributed to the ether. He held the opinion that the theoretical body which had been introduced into the last discussion caused all the harm.

Dr. E. H. Binney called attention to the use of the term reflex respiratory shock. Shock was a condition deeply connected with the vascular system. He therefore asked Dr. Lidwill to state what he meant by this term.

Dr. Sinclair Gillies asked whether the patient had been given any drugs, including morphine and atropine, before the anaesthetic was administered. He expressed the opinion that the fact that the heart had gone on beating in some of these cases for a half an hour after the respiration had stopped, and that all endeavours to make the patient breathe again had failed, suggested that there was a toxic effect on the respiratory centre.

Dr. F. P. Sandes referred to the difficulties which anaesthetists encountered in operations on patients suffering from exophthalmic goitre. Anaesthetists had become very expert in dealing with this emergency. When respiration ceased there bubbled forth a profuse, fine, frothy, watery sputum, indicative of acute oedema of the lung. He asked Dr. Lidwill whether he had had a similar experience.

In his reply, Dr. Lidwill pointed out to Dr. Binney that shock in the sense frequently used was a very elastic term. Anaesthetists speak of respiratory shock, meaning a reflex condition affecting the nervous system generally, produced when the surgeon catches hold of the parietal peritoneum. In regard to the question of preliminary narcosis, no drugs or other anaesthetics were employed in the cases at Lewisham Hospital, at the Royal Prince Alfred Hospital and in Dr. MacPherson's and his own cases. He had never seen acute oedema of the lung arising during anaesthesia in cases of exophthalmic goitre. He referred to Hewitt's publications on this subject.

Replying to Dr. Stewart McKay, he said that Dr. McKay had not quite understood his paper. Prior to March, 1915, the Australian ethers were all quite satisfactory. From April, one brand of ether appeared to contain some body in a fixed condition, which caused respiratory failure. It was quite impossible to deny the danger of this ether during a short period. Several surgeons had refused to give permission for this ether to be used.

Varicocele.

Dr. John Flynn read a paper on "Varicocele: Its Congenital Origin; Its Effects in Civil Life; Its Military Aspect; Its Operative Treatment, when (a) Justifiable, and (b) Expedient" (see page 573).

Dr. D. Kelly expressed the opinion that no one present, save perhaps Dr. H. G. Chapman, would be in a position to discuss the developmental aspect of this question. Dr. Flynn had dealt so thoroughly with this matter that there was nothing left to be said. In regard to the operation, the choice lay between making an incision through the scrotum or making one through the inguinal region. The latter, he considered, should be abandoned. Too little care had been bestowed on the endeavour to preserve the genital branch of the genito-crural nerve. He was of opinion that pain in varicocele was due to the testicle hanging too low.

Division of the inguinal branch of the genito-crural nerve would relieve this pain. He expressed his indebtedness to Dr. Flynn for his very able paper.

Colonel A. E. Perkins recounted the experience of the Public Service, which led to the adoption of the regulation excluding from military service men with varicocele. It had been found that varicoceles of small dimension became encumbrances after forced marches. He had operated on a number of men during the past six months, and these men had all gone to the front. He stated that he had never seen any of the evil results mentioned by Dr. Flynn in patients who had been subjected to operation.

Dr. W. T. Chenhall referred to the effect of tropical conditions on varicocele. It was well known that men in the Indian Service suffered considerably more than those in temperate climates. Experience taught that both men and women in India suffered considerably from conditions of prolapse of various organs. Prolapse of the bowel, varicocele, and *prolapsed uteri* were all common. Relief was often obtained in persons in the Indian Service after several months' leave to England. Dr. Chenhall expressed the opinion that a man who had a varicocele was bound to suffer when carrying out military duties. If this were so, no man with a varicocele could be regarded as fit for service. In turning his attention to the operative treatment of this condition, he expressed the doubt as to whether the young surgeon in the country would do any damage of the kind described by Dr. Flynn. He was inclined to advise operation in marked cases. When no symptoms were produced, he thought that the recruit might be accepted without an operation being performed.

Dr. Sandes spoke of a case that he had seen on the same afternoon. The patient was a soldier who had been operated on in Egypt for varicocele. The condition of the testis had been rendered worse. The organ was enlarged; there was more fluid in the *tunica vaginalis*, and the epididymis was indurated and thickened. The man had been returned home invalided. Dr. Sandes spoke of the bad results of operation in varicocele, and denied that these results were referable to venereal disease, as had been stated. He agreed with Dr. Flynn that the effect of the operation was at times very undesirable.

Dr. Stewart McKay said that it would almost appear as if there were an epidemic of varicocele. He considered that regulations excluding men with varicocele were justified. Men in civil life with this affection were subject to mental and physical suffering. The physical trouble consisted in dragging pains, which were often reflected upwards. Patients often suffered considerably. These symptoms were not entirely removed by the wearing of a suspensory bandage. He referred also to the effect of the swelling and of the discomfort on the patient's mental condition. He was of opinion that the mental effect was not a small one.

The removal of the whole mass of enlarged veins no doubt would damage the testis. He suggested that some of the veins should be preserved, and dealt with the operation from the point of view of protecting the veins to be left and the nerves.

Dr. E. H. Binney held the view that many patients with varicocele belonged to a class of people known as neurotic. The production of a scar in a neurotic subject was frequently undesirable. Scar neuralgia was not uncommon, and was often intractable. The same thing applied to varicocele. He was therefore not in favour of operating, save when the indications were urgent. He held the opinion that the scrotal operation might be preferable from a commercial point of view, but that the inguinal operation was undoubtedly the better from the humane point of view.

Dr. Howard Bullock pointed out that Sir Alexander MacCormick would not perform an operation for a varicocele. He argued that the operation was not only useless, but was unnecessary.

Dr. Flynn, in thanking the members for the way in which his paper had been received, and for the interest which the members had exhibited on the subject during the discussion, pointed out that there were no points on which he desired to reply. He was satisfied that the question of the operative treatment of varicocele had received the attention of those present at the meeting.

MEDICO-POLITICAL.

A meeting of the Council of the Victorian Branch was held at the Medical Society Hall, East Melbourne, on December 9, 1915, Dr. A. V. M. Anderson (the President) in the chair.

The President welcomed the new members of the Council. It was resolved that a letter be sent to Dr. Noyes, late Honorary Librarian, expressing the appreciation of the Council of the long and valuable assistance he has given to the Branch.

It was also resolved that a letter of sympathy be addressed to the widow of the late Dr. W. C. Wilkinson.

Dr. J. Dunbar Hooper was elected Honorary Assistant Secretary, and Dr. W. Ernest Jones was appointed Honorary Assistant Treasurer.

Colonel R. H. Fetherston was appointed Director for Victoria of the Australasian Medical Publishing Company.

The President was appointed Representative on the Council of the Bush Nursing Association, and Dr. H. Douglas Stephens was re-appointed to the Advisory Board to the Medical Inspector of Schools.

The following members were appointed members of the various sub-committees of the Branch. The first named in each list will act as convener.

Organization: Drs. McAdam, Crellin, Balfour, Fetherston, Latham, Ostermeyer, and Robertson.

Press: Drs. Lewers, Honman, Latham, and Wilkinson.

Ethical: Drs. Kenny, Davies, Balfour, Latham, and McAdam.

Legislative: Drs. Newton, Crellin, Cumpston, Davies, Honman, Jones, Latham, and Ostermeyer.

House: The Honorary Treasurer, the President and the Honorary Secretary.

Scientific: Drs. Hiller, Lewers, Newton, Robertson, and Stephens (with power to add the name of any member of the staff of a special or general hospital).

War Organization: Mr. Crouch, Drs. Berry, Boyd, Honman, Hopper, Latham, and McAdam.

A letter was read, addressed by the Defence Department to the Commandant of the 3rd Military District. The Branch was asked to submit its views on the matter dealt with. It was proposed that junior medical practitioners volunteering for service abroad should be admitted to the Australian Imperial Force, and allotted to the Civil Public Hospitals, pending a definite appointment in the A.I.F. This allotment should not exceed the period of three months. The Council considered that the proposals were unworkable, and directed that a letter conveying this opinion should be sent to the Department.

A letter was received from a member, pointing out that two classes of convalescent hospitals for invalided soldiers were being established; one wholly under Government management, with medical officers paid by the Defence Department, and the other established by a semi-official body, such as the Red Cross Society, with medical officers appointed by a committee. It was desired that a ruling should be given by the Council as to the attitude members should take to such convalescent hospitals. The Council resolved that members were free to do medical work in convalescent hospitals in a purely honorary capacity if they desired.

A letter was received from the Pharmaceutical Society, in which it was pointed out that there was a great shortage of drugs formerly of German origin. It was suggested that some step should be taken to conserve the stocks in hand. If this were not done, these drugs would be soon unobtainable. The Pharmaceutical Society had asked pharmacists to keep medical practitioners informed in regard to those drugs which were scarce or of which the price had increased abnormally.

It was resolved that the letter, together with a list of prices obtaining at the present time, and those of twelve months ago, be forwarded to *The Medical Journal of Australia*, with a request that they be published in the columns of the *Journal*.

The Ethical Committee was instructed to prepare a list of appointments for inclusion in the "Important Notice" published in *The Medical Journal of Australia*.

Dr. David Bickart, of the Ballarat Hospital, was elected a member of the Branch.

We have been requested by the Council of the Victorian Branch to publish the following letter:—

Pharmaceutical Society of Australasia,
Melbourne, 2nd December, 1915.

The Secretary,
British Medical Association (Victorian Branch),
Melbourne.

Dear Sir,—

I am requested by the Council to bring officially under the notice of your Association the great scarcity in certain drugs which exists at the present time, and also the high prices which are being charged by the wholesale houses for many drugs and chemicals which were formerly of German origin.

It has been suggested that your Council might see its way to adopt some course which would have the effect of somewhat relieving the present situation, which is not only a source of anxiety to the pharmacist, but is also considerably affecting patients, owing to the higher prices which necessarily have to be charged when expensive drugs are prescribed.

It is suggested that, where possible, drugs of German origin be not prescribed, and that pharmacists in different localities be asked to keep physicians advised regarding those drugs which are scarce or have abnormally increased in price.

The Council feels that unless some steps are taken to conserve supplies, a number of drugs will become unobtainable.

Any suggestions which your Association may offer in the direction indicated will be welcomed by pharmacists generally throughout the State.

Yours faithfully,

(Signed) C. L. BUTCHERS,
Secretary.

The following information has been supplied by a leading wholesale druggist in Melbourne to the Secretary of the Pharmaceutical Society of Australasia:—

The Secretary,
Pharmaceutical Society of Victoria,
Swanston Street, Melbourne.

Dear Sir,—

In response to your request, we have pleasure in giving you at foot a comparison of prices of a few everyday lines used in pharmacy. We give you the prices at which the goods mentioned could be bought in London in July, 1914, and also the prices quoted in London wholesale lists on the 1st October, 1915, or 15 months later.

Some of the higher prices are not those quoted in October English lists, but are those cabled to us within the last few weeks.

It must not be overlooked that, added to these quotations has to be reckoned the large increase in freight rates, increase in bank rate of exchange, also extra insurance in the shape of war risk; then, duty has to be added when necessary, as required by the tariff.

Trusting the information will prove of service to you, we remain, etc.

	London Price, July, 1914.	London Price, Oct., 1915.
Ammon. bromidum	2/- lb. ..	18/- lb.
Acid. acetyl salicylicum ..	1/10 lb. ..	64/- lb.
Acid. boricum	30/- cwt. ..	40/- cwt.
Acid. salicylicum	1/- lb. ..	18/- lb.
Antim. tartaratum	1/1 lb. ..	3/6 lb.
Bismuth. carbonas.	8/4 lb. ..	11/5 lb.
Bismuth. subnitras.	7/3 lb. ..	10/9 lb.
Caffeine citras.	9/- lb. ..	24/- lb.
Calci lactas	1/- lb. ..	13/- lb.
Chloral. hydras.	1/- lb. ..	12/6 lb.
Extract. belladonnæ	2/3 lb. ..	9/6 lb.
Extract. filicis maris liq. ..	4/6 lb. ..	26/- lb.
Guaiacol carbonas	6/6 lb. ..	62/- lb.
Hydrarg. subchlor.	2/6 lb. ..	6/3 lb.
(Other mercurial salts in the same ratio.)		
Lanoline (adeps lanæ)	-/8 lb. ..	4/2 lb.
Magnesium sulphas.	3/- cwt. ..	18/- cwt.
Morphin. hydrochlor.	8/9 oz. ..	14/- oz.
(Other morphine salts in the same ratio.)		

	London Price, July, 1914.	London Price, Oct., 1915.
Ol. jecoris	2/10 gall. ..	16/- gall.
Ol. ricini opt.	29/- cwt. ..	46/- cwt.
Paraffinum liquid. B.P. ..	3/6 gall. ..	15/- gall.
Paraldehydum	1/5 lb. ..	45/- lb.
Phenacetinum	2/9 lb. ..	57/- lb.
Phenazonum	6/5 lb. ..	75/- lb.
Phenolphthaleinum	6/- lb. ..	45/- lb.
Potass. bromid.	1/6 lb. ..	18/- lb.
Potass. carbonas.	-/8 lb. ..	2/- lb.
Potass. permanganas	-/4 lb. ..	3/3 lb.
Quinine sulphas.	1/4 oz. ..	5/- oz.
(All quinine salts accordingly.)		
Rad. belladonnæ	-/4½ lb. ..	3/- lb.
(All belladonna preparations accordingly.)		
Rad. ipecacuanhæ	9/6 lb. ..	20/- lb.
(All ipecacuanha preparations accordingly.)		
Resorcinum	2/4 lb. ..	60/- lb.
Salol	1/10 lb. ..	15/- lb.
Sodii. bromidum	1/10 lb. ..	18/- lb.
Sodii. salicylas.	1/3 lb. ..	18/- lb.
Sulphonah.	10/- lb. ..	40/- lb.

Public Health.

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending December 2, 1915:—

	Metro- politan. Cs. Dths.	Rest of State. Cs. Dths.	Totals. Cs. Dths.
Diphtheria	47 0 ..	20 1 ..	67 1
Scarlatina	12 0 ..	1 0 ..	13 0
Enteric Fever.	1 0 ..	7 0 ..	8 0
Pulmonary Tuberculosis	22 6 ..	8 5 ..	30 11

The following is the return of cases of epidemic cerebro-spinal meningitis reported to the Board during the week ending December 2, 1915:—

	Metroplitan Area. Cases.	Rural Districts. Cases.	Totals. Cases.
Military	1
Civil	5 ..	4 ..	9

The following notifications have been received by the Department of Public Health, Victoria, during the week ending December 9, 1915:—

	Metro- politan. Cs. Dths.	Rest of State. Cs. Dths.	Total. Cs. Dths.
Diphtheria	61 2 ..	26 1 ..	87 3
Scarlatina	13 1 ..	1 0 ..	14 1
Enteric Fever.	3 0 ..	11 0 ..	14 0
Pulmonary Tuberculosis	25 7 ..	16 6 ..	41 13

The following is the return of cases of epidemic cerebro-spinal meningitis reported to the Board during the week ending December 9, 1915:—

	Metroplitan Area. Cases.	Rural Districts. Cases.	Totals. Cases.
Military	2
Civil	5 ..	7 ..	12

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending November 27, 1915:—

Name of Disease.	No. of Cases.
Diphtheria	24
Scarlet Fever.	6
Enteric Fever.	54
Cerebro-Spinal Meningitis	4
Pulmonary Tuberculosis	4
Erysipelas	2
Varicella	16
Malaria Fever	1

Total 111

The following notifications have been received by the

Department of Public Health, Queensland, during the week ending December 4, 1915:—

Disease.	No. of Cases.
Diphtheria	27
Scarlatina	6
Enteric Fever	90
Pulmonary Tuberculosis	15
Erysipelas	2
Varicella	12
Ankylostomiasis	1
Puerperal Fever	1
Total	154

SMALL-POX IN NEW SOUTH WALES.

The following cases of small-pox have been reported to the Department of Public Health, New South Wales, during the week ending December 5, 1915:—

Country—	Cases.
Newcastle and surrounding district	11
The following cases of small-pox have been reported to the Department of Public Health, New South Wales, during the week ending December 12, 1915:—	
Sydney	5
Country—	Cases.
Newcastle and surrounding district	16
Gloucester	1
Bega	1
Total	23

In twenty-one of these cases the infection has been traced to Newcastle. In two of the cases occurring in Sydney the source of infection has not been discovered.

Since epidemic cerebro-spinal meningitis has been notifiable in the State, 18 cases have been notified to the Civil Authority. This number does not include the cases occurring in the hospitals. During the month of November 10 cases were notified, with 4 deaths. There has been one death in the present month.

CEREBRO-SPINAL MENINGITIS IN SOUTH AUSTRALIA.

Through the courtesy of the Acting Secretary of the Adelaide Hospital, we have received the official return of admissions and deaths of patients suffering from cerebro-spinal meningitis. Since July 21 173 of these patients have been admitted to the hospital with the diagnosis of cerebro-spinal fever, and 42 of these patients have died. In the week ending July 28, 1915, there were 14 cases, with 1 death; in the following four weeks there were 43 cases, with 15 deaths; in the following four weeks (September) there were 47 cases, with 9 deaths; in the four weeks ending October 29 there were 30 cases, with 8 deaths; in the four weeks ending November 30 there were 31 cases, and 7 deaths; while in the first five days of December there were 8 cases and 2 deaths. The case mortality is consequently 24.2%, which is considerably lower than that recorded in other parts of the Commonwealth and elsewhere.

THE HEALTH OF HOBART.

The following notifications have been received by the Health Department, Hobart, for the month of November, 1915:—

Disease.	Cases.
Diphtheria	7
Scarlatina	3
Cerebro-Spinal Meningitis	2
Enteric Fever	1
Puerperal Septicæmia	1
Puerperal Fever	1
Total	15

THE HEALTH OF AUCKLAND.

The following notifications have been received from the District Health Officer, Auckland, during the month of November, 1915:—

	City. Cases.	Suburbs. Cases.	Country Districts. Cases.	Total. Cases.
Scarlatina	13	26	7	46
Diphtheria	7	7	15	29
Enteric Fever	5	4	23	32
Pulmonary Tuberculosis	5	4	6	15
Blood-Poisoning	2	—	1	3
Cerebro-Spin'l M'n'gitis	—	1	2	3
Hydatids	—	—	1	1

Medico-Legal.

NESBIT v. GILES.

Considerable interest attaches to a case which was heard in the Adelaide Police Court on December 3, 1915. Mr. Paris Nesbit, K.C., proceeded against Dr. William Anstey Giles on a charge of having made a false statement in a medical certificate under the Mental Defectives Act, 1913. Mr. H. W. Varley, S.M., supported by other Justices occupied the Bench. Mr. E. E. Cleland, K.C., appeared for Dr. Giles.

Mr. Nesbit conducted his own case, and stated in his opening speech that, under the old Act, doctors were placed in a more disadvantageous position than they were at present. Under the 1913 Act they were only liable if they wilfully certified wrongly, or wilfully made any false or misleading statement. There was no more reason why he should have been discharged by Mr. Justice Buchanan the other day than at any other time after he had been admitted to the Mental Hospital. Before he was removed to the hospital he had not the least idea what Dr. Giles had written on the certificate. It had taken him nine days to get before a Judge of the Supreme Court. He was told that Dr. Giles was distressed over the action, but the doctor did not think of the distress caused to himself or to his wife. His son had been interested in keeping him in the hospital, "in order to steal his practice." Dr. Giles had stated in his certificate that he, Mr. Nesbit, had shouted at him and called him offensive names, had abused the medical profession, had been excited without reason, and vowed that the police were bearing false evidence against him. It was a lie to say that he had been excited. Except for the part about the police, there was not a word of truth in the certificate. He did not abuse the medical profession, because, as a profession, no body of men did more for love of man than the doctors. If the doctor in that case elected to go before the jury, the Judge would impose the sentence, but if he were tried and found guilty by His Honour, he hoped that the doctor would get six months in gaol.

Dr. M. H. Downey, Acting Medical Superintendent of the Parkside Mental Hospital, produced Dr. Giles's certificate.

Malcolm McBean, Assistant Clerk of the Adelaide Police Court, stated that the signature on the certificate was Dr. Giles's. The certificate was witnessed, but not in the presence of Mr. Nesbit. On November 4, 1915, witness heard a noise, and told the watch-house keeper to speak to the person making the noise. It was discovered that the person making the noise was Mr. Nesbit, who called the constable a — fool. Later Mr. Nesbit was removed to the padded cell by three policemen. Witness subsequently saw him in Court dressed in an overcoat, without other clothes. Mr. Gepp was on the bench, and when Mr. Nesbit was brought in, he said, "Hullo Gepp!"

Mr. Nesbit interposed with the remark that he said, "Hullo Geppie!"

Continuing, witness stated that Mr. Nesbit had called one of the witnesses a — liar. During the examination Mr. Nesbit had a drink, and then threw the glass away. While in the dock Mr. Nesbit interjected a number of times, and was very excited. He referred to the medical profession generally in an abusive manner.

Mr. Paris Nesbit, in giving evidence, described himself as a barrister, but stated that he had resigned the office of King's Counsel on the previous day. He stated that on November 4, 1915, Dr. Giles had an interview with him. Witness was dressed only in an overcoat, which covered

him from his shoulders almost to his ankles. He kept the overcoat buttoned or folded across in front. The only part of his body exposed were his ankles. He explained the reason why he had not other clothes on than his overcoat. He went to the Grand Central Hotel and undressed in his room, prior to having a bath. He put on his overcoat as a dressing gown. He rang the bell for lunch several times, and then went into the passage and rang the lift bell. He then returned to his room and locked the door. The manager came up and seemed angry. Witness asked one of the women for the address of the Melbourne management, in order that he might report Hennessy, the manager. A woman brought him his lunch. Hennessy came up a second time, and ordered him to leave the hotel. He refused, and Hennessy and two policemen rushed him off in an ambulance, and placed him in a cell at the police station. Witness acknowledged that he was "a bit angry," and, after Hennessy made a statement, he called him a b—— liar. He explained that the adjective was Australian, and the most gentle form of swearing, as it was an abbreviation of "By our Lady." At the enquiry, evidence was given to the effect that he had exposed himself to two women at the hotel. Mr. Gepp had not the brains to call these women to disprove it. He offered to give £100 to every woman to whom he had exposed himself. Dr. Giles had said to him in a most insolent way: "What have you been up to?" That was the full extent of the examination he made of witness, but there was a subsequent conversation. He did not shout at Dr. Giles, but he might have called him a b—— fool. If he did, he thought that he was justified. He did not rant about the members of the medical profession generally. That was an absolute lie. He never lost his self-control. If he had done so for five minutes, the yard would have been full of dead policemen, as he was a strong man. He said that the police gave false evidence. He was prosecuting them for perjury. He had one glass of brandy early in the day of November 4, at the Gresham Hotel; then took a car to the Military Hospital at Cheswick, and offered the authorities his wife's house as an adjunct to the hospital. He had some French drink down there, and agreed to supply the hospital with what he considered the best brandy and whisky in the world.

He told Dr. Giles that a certain doctor was believed to have poisoned a man with morphine, and to have killed two or three women by poisoning them. He had been told that the British Medical Association had spoken of holding an enquiry, but nothing had been done. He said to Dr. Giles that doctors placed their *esprit de corps* before truth.

The certificate signed by Mr. Gepp contained an entry of his age as being 65. That was a shame, because he was only 63. No one who had brains stronger than an ordinary rabbit could have sent a man down to the mental hospital on a certificate like the one produced.

In cross-examination by Mr. Cleland, witness maintained that he had got documentary evidence that his son was interested in keeping him in the mental hospital, in order to steal his practice. He had laid information against Malloy, Williams and Hennessy, and was prosecuting Sir Langdon Bonython for malicious libel, and had an action against the same person for civil libel. He intended to claim £1,000 damages against the proprietor of a newspaper for breach of agreement. He was bringing an action against Mr. Hardy, Manager of Ruthven Mansions, and intended to prosecute him for forcible entry. He was claiming £25,000 damages against the Grand Central Hotel, and that it was "jolly little to pay." He had reported Mr. Gepp for incompetence and want of *bona fides*.

He considered it a disgrace, and a most unjust thing for women to sit on the bench in judgement of men. He referred to Mrs. Nicholls as "that fat woman," and hoped that she heard it. He referred to Lady Holder as "Holder," because she said that no barmaid over five years in the profession was chaste. If she repeated the statement he would bring an action against her. He would find some of his barmaid friends, who would make her prove it. He admitted that it was not a proper way to behave in Court. He acted in accordance with the Scriptural injunction, "Be angry and sin not!"

On November 4, 1915, he contemplated having a bath at the Grand Central Hotel after lunch. He invariably took

a bath after a meal. When he ordered his lunch he was dressed in nothing but an overcoat, but it was "perfectly decent." It was a hot day, and he wanted to get his clothes off as soon as possible. He did not strike Hennessy when he came up.

On being questioned by Mr. Cleland in regard to medical etiquette, he stated that he had heard that if a married woman was suffering from a venereal disease the doctor would not tell her what was the matter. He thought that was hellish. After he had been in the Asylum for a couple of days, he sent for a doctor to report on his condition. This doctor was perfectly satisfied that he was sane, but would not give a written report. Dr. Waters was the only man prepared "to give his opinion in the teeth of the medical etiquette." Asked what he called ranting, witness sprang to his feet, and, leaning over the rail, shouted, "Ranting is using language in excess, with a high degree of oburgation, in an excessively loud tone of voice." He stated that he had just given a demonstration of ranting. He denied that he was completely naked at any time while the door was unlocked, and that one of the constables buttoned up his overcoat.

William F. Owen, a solicitor, gave evidence to the effect that he was present during the conversation between Mr. Nesbit and Dr. Giles. The prosecutor shouted at the doctor occasionally. He did not use excessive gesticulations or very abnormal violence of language.

In opening the case for the Defence, Mr. Cleland contended that the prosecution had failed. The evidence called proved that the statements in the certificate were true. According to Section 159 of the Mental Defectives Act, the onus was on the prosecution to prove that Dr. Giles had acted, or omitted to act, without good faith and without reasonable care.

The Stipendiary Magistrate stated that he had followed the evidence carefully, without endeavouring to interfere at all. He had taken every opportunity of watching the demeanour of Mr. Nesbit and his witnesses, and had attempted to discover anything that would justify him in committing Dr. Giles for trial, or in asking him if he preferred that the case would be tried in that Court. The evidence was the most remarkable and extraordinary that he had ever listened to. In his opinion there was absolutely no evidence upon which he could act or which he considered worthy of acceptance in support of the charge that had been made. The element that anything he had done was done wilfully was totally absent. There was nothing to show that Dr. Giles had not acted in good faith. He therefore dismissed the information.

Mr. Nesbit retorted warmly that he would be a blithering idiot if he accepted that. Another information would be laid before Dr. Giles next year. He would find a magistrate who would deal with it properly. They would see if the doctors could defy the law in that way.

[Owing to want of space it has been found impossible to deal with this important matter in the present issue. We propose to discuss some of its aspects next week.]

Naval and Military.

On December 8, 1915, an announcement was published that Lieutenant-Colonel N. R. Howse, V.C., had been promoted to the rank of Surgeon-General. We offer our hearty congratulations to General Howse for this well-deserved honour. Lieutenant-Colonel J. L. Beeston has been invested with the Order of the Companion of St. Michael and St. George.

The medical staff of the New Zealand hospital ship *Mararama* consists of Lieutenant-Colonel P. R. Cook, O.C., Lieutenant-Colonel J. M. Mason (bacteriologist), Major Carrick Robertson (chief surgeon), Major Stow (radiologist), Captain A. Robertson, Captain Pottinger and Captain Louison (surgeons), Captain Fairclough (ophthalmic surgeon), Captain Maloney and Captain Read.

The following appointments have appeared in the *Commonwealth of Australia Gazette*, No. 155, under date of December 9, 1915:—

To be Lieutenant-Colonel—

Honorary Captain H. S. Stacy, Australian Army Medical Corps Reserve.

To be Majors—

Captain J. W. Browne, Australian Army Medical Corps.
William Sidney Sweet.

To be Captains—

Captain (provisional) R. F. Craig, Australian Army Medical Corps.
Honorary Captain E. M. Allester, Australian Army Medical Corps Reserve.
James Vine Pearce.
Archibald John Collins.

Captain John MacPherson, A.F.A., has been appointed Adjutant (provisional) of the 5th Australian Field Artillery Brigade, 2nd Military District.

Hospitals.

VICTORIAN EYE AND EAR HOSPITAL.

The Annual Report of the Victorian Eye and Ear Hospital for the year ending June 30, 1915, informs us that 8,799 persons were under treatment during the year, and that no less than 36,410 attendances were accorded. There were 660 patients whose treatment was begun in the previous year. Of those admitted during the year 6,873 were residents with a 50-mile radius of Melbourne. The number of in-patients was 1,105, of whom about one-fifth were children under 15 years of age. It is stated that were it not for the treatment accorded these young people, they would probably become a burden to the State in later life.

The following members of the honorary medical staff have taken up active military or naval duty at home or abroad:—Dr. R. E. Shuter, Dr. R. W. Hornabrook, Dr. A. F. Bell, Dr. G. A. McArthur, Dr. E. Robertson, Dr. G. Miller, Dr. E. W. Gutteridge, and Dr. C. Morlet. The members of the honorary consulting staff who have undertaken military duties are Dr. J. W. Barrett, C.M.G., Dr. Hamilton Russell and Dr. Stawell.

Dr. Sewell and Dr. Hiller have become Honorary Consulting Physicians to the Hospital. Dr. Mary Glowery, the Refractionist, rendered valuable service by undertaking the duties of the Resident Surgeon. Dr. G. Sutton was appointed Clinical Assistant.

The Committee has placed at the disposal of the Defence Department 10 or more beds for soldiers suffering from affections of the eye and ear requiring skilled treatment.

A new pathological department has been opened, and an X-ray apparatus installed.

The balance-sheet shows that the income of the institution for the year was approximately £5,500. The patients contributed about £2,156. Private contributions amounted to £518, Hospital Sunday Fund contributed £440, entertainments and church collections added a further £19 to the credit of the hospital. In addition, £510 were given in the form of bequests and donations, and nearly £240 were obtained from various sources. The income from the patients and from the public therefore amounted to £1,913. The Government grant was £950, and the municipal grant £318. The balance was made up of interest on investments, and the credit balance carried over from the previous year. The maintenance is divided into various headings, viz., provisions £1,394, surgery and dispensary £659, domestic £870, establishment £512, salaries £1,421, miscellaneous £199, and administration £540. An expenditure of £33 was made in respect to the X-ray equipment, and the buildings.

The medical details are extremely scanty. It appears that of the 1105 patients under treatment during the year 1,017 patients were discharged as cured, and 4 died. There were 703 ophthalmic operations, 537 on the throat, 401 operations on the nose, and 122 operations on the ear were performed. Of the ophthalmic operations 85 were performed for cataract. The eye was removed 60 times, 53 times for injury, 2 for corneal ulcer, 2 to glaucoma, and 3 times for tumour. A large proportion of the throat operations consisted in the removal of tonsils and adenoids. In 136 cases

a sub-mucous resection of the septal cartilage was performed, while 75 operations on the maxillary antrum, and 88 on the turbinates were carried out.

NEGLECTED CHILDREN.

The Annual Report of the Department for Neglected Children of Tasmania for the year ending June 30, 1915, has been published in accordance with the provisions of the Youthful Offenders and Destitute Neglected Children's Act, 1906. During the year, 82 children were committed to the care of the Department, bringing the total number of children under its supervision up to 395. Of the 82 children, 43 were boarded out with foster mothers, 20 were placed in the Boys' Training School, 6 were placed in the Boys' Home, Hobart, 6 were placed in the Girls' Industrial School, Hobart, 4 were placed in the Girls' Industrial School, Launceston, 2 were returned to their relatives and one was placed in the Salvation Army Home. There were 7 under one year of age, and 26 under 5 years of age. The three eldest were in their sixteenth year. The birth-place of 80 was Tasmania, while one was born in Victoria and one in England. At the end of the year 289 of the children were in the various industrial and training schools or with foster mothers under the boarding-out system. Seven children had been adopted during the year, and in three cases the circumstances of the parents had improved sufficiently to enable them to receive their children back.

The gross expenditure of the Department amounted to £46,331 8s. 10d. This sum was £242 2s. 11d. more than in the previous year. The foster mothers made representations for an increase in the allowance, on account of the increase in the cost of commodities. The amount paid was augmented to 6s. 6d. per week for each child under eight years, 7s. 6d. between eight and ten years, and 9s. for each child over ten years of age. At the Industrial School, 6s. weekly is paid for each child under 15 years of age, and 5s. weekly for each child between 15 and 16 years of age. The net cost per head for children boarded out was £16 7s. 3d., and for children in the Industrial and Training Schools £13 19s. 9d. per annum. Repayments to the total of £360 12s. 9d. were received. The number of children maintained at the expense of the State was 314, as compared with 289 at the end of the previous year.

A great demand for apprentices was met by the Department. Good homes were obtained for the children. The boys were usually placed with farmers or orchardists, while the girls were sent to domestic service.

It was anticipated that the number of destitute and neglected children would increase largely as the result of the departure of a large number of men with the Expeditionary Forces. In the majority of instances, however, ample provision was made by the men for their children. A few cases of illegitimate children, whose reputed fathers were at the war, came under the notice of the Department. In these cases the Military Authority attempted to induce the fathers to make provision for their children.

The foster mothers carried out their duties satisfactorily. In only one case was the registration cancelled. In this instance, the foster mother allowed the child to sell sweets at a picture show. Picnics and other treats were arranged for the children, and brightened their existence. While several cases of sickness were reported, no death took place among the 395 children.

Special reports from the four industrial and training schools are appended.

Correspondence.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

Sir,—One has read with interest the paper entitled "The Pathology and Bacteriology of Epidemic Cerebro-Spinal Meningitis," by Dr. R. Webster, in your issue of 6th inst.

Dr. Webster says that cultural examination of nasopharyngeal secretions for the detection of carriers is impracticable with limited assistance, and he comes to this opinion on account of the difficulty of the examination in the presence of mixed micro-organisms and the seeming necessity for isolation and fermentation reactions in each

case. One realizes the truth of this statement from a purely scientific point of view, but it is important that we should make the science of bacteriology as practical as possible, at the same time retaining the necessary scientific accuracy. I therefore would like to give some of our experiences gained in the examination of material from cases of cerebro-spinal meningitis and contacts.

After the use of several varieties of culture media, I came to the conclusion that Löffler's blood serum gave the best results. *Nasgar*, so widely recommended, has several drawbacks. Samples of ascitic fluid vary so much in their cultural properties that, unless each sample is well tested beforehand, it is inadvisable to use this substance as an enriching medium. This being so, we have practically discarded its use in this laboratory.

Fortunately, we are able to command large quantities of blood serum. This is obtained from a living horse by the usual aseptic methods. The serum is pipetted off from the blood clot, and prepared in the usual way by the addition of glucose broth. This is then run into test tubes $\frac{3}{4}$ inch in diameter, and coagulated by heat. These are more economical and easier to work with than plates, although the ideal method is plating.

The reaction of this medium is, of course, slightly alkaline, and we have found this medium the most favourable to the growth of the meningococcus. Serum added to the ordinary 1% agar does not give such good results. Also, a moist medium is found to be better than a dry one.

The instrument used for taking the swab from the naso-pharynx is a flexible wire with a cotton swab attached at one end, the whole being protected in a glass cannula slightly bent at the end. This is plugged at both ends with cotton and sterilized. To inoculate the medium the small plug is removed from the end of the cannula, the swab wire pushed forward and the whole inserted into the test tube. The material is then washed off the swab by gently moving it up and down in the water of condensation, which is allowed to run forward in the tube.

The water of condensation is then evenly distributed over the culture slant, which is incubated lying flat on a slightly slanting tray in the incubator. The same swab is used to inoculate another tube of culture medium in the same manner. This medium used in this way has given excellent results.

If the swab has been well protected from contamination with the usual oral flora, either one or the other of the culture slants will show a satisfactorily diffuse growth of bacteria.

The recognition of the character of the bacterial colonies is of the most important diagnostic value. The character of the colony of the meningococcus is constant, and no other Gram-negative coccus from the naso-pharynx possesses like characteristics. We have come across a Gram-negative coccus several times which at first offered some difficulties. This coccus gives a clear, smooth growth, which later becomes yellowish, but until this yellowish tint appears the growth might be mistaken for the growth of a meningococcus.

This coccus, however, grows readily on ordinary agar, and is probably related to the coccus found in the Hertford case of influenza-like epidemic (see *Hewlett's Manual*, fifth edition, p. 245).

A colony of meningococci will usually attain a diameter of 2 mm. in 24 hours, is raised, usually circular, is moist, viscid-looking, smooth and translucent. These characteristics will, in the great majority of cases, be sufficient to identify the meningococcus. The diagnosis is, of course, confirmed by microscopic examination.

In making the smear for microscopic examination, it is well to allow a rather large drop of saline for emulsification of the bacterial growth. This prevents any tenacious bacterial growth from becoming unduly ground up on the glass slide. The meningococcus will be found to be evenly distributed throughout the smear, whereas the *M. catarrhalis* and allied bacteria will be found in clumps.

These are roughly the characteristics relied upon for the identification of the meningococcus.

After an experience in the examination of several hundreds of naso-pharyngeal swabs, I think we can claim that the method has given for the most part reliable results.

I can see no reason for the isolation and further testing of suspicious Gram-negative cocci. One would not insist upon such procedure in the examination of throat swabs for the diphtheria bacillus, and yet, in this examination, there is only one absolutely reliable test, and that is the virulence test. Of course, it is possible to make mistakes, but this should not deter us from an attempt to make bacteriological examinations of practical help and value.

I am of opinion that the examination of naso-pharyngeal swabs is the most important of all bacteriological examinations in connexion with an epidemic of so-called cerebro-spinal meningitis. It is probable that our previous conceptions of this disease are not quite correct, and that we should regard the epidemic as one of meningococcal fever (or give it any other name that more correctly describes the condition), an influenza-like disease, in which approximately 5% of cases develop cerebro-spinal meningitis. If this view be correct, it becomes increasingly important to recognize the nature and to ascertain the cause of all cases showing symptoms of an influenzal character, particularly during an epidemic such as the one we are at present experiencing. Such early recognition may mean the prevention of more serious symptoms developing.

One need hardly insist any further upon the importance of the examination of naso-pharyngeal swabs.

I think that Dr. Webster will agree in the main with what I have said, but, because I feared that his remarks might mislead some people, and because I wished to insist upon the honest attempt of all bacteriologists to make their science as practical as possible, I have taken the liberty of occupying so much of your valuable space.

Yours, etc.,

LIONEL B. BULL.

South Australian Government Laboratory of Pathology
and Bacteriology, Adelaide Hospital,
November 15, 1915.

Obituary.

HARRY OSWIN JOHNSON.

By the death of Dr. H. Oswin Johnson at "The Terraces" Private Hospital on December 6, 1915, the district of Parkes has lost a wise and trusted physician, whom it will be difficult to replace.

Dr. Johnson purchased the practice of the late Dr. Goodlette Murray, of Parkes, about 20 years ago. During this lengthened period it may be truly said that Dr. Johnson has held the respect and esteem of all whose respect and esteem were worth having.

Fond of his work, and conscientious in keeping himself abreast of all advances, he was a successful medical practitioner, while his intellectual tastes and well-stored mind made him an agreeable companion, and his gentle and loyal nature gained him many friends.

Dr. Johnson was a native of England, and was left an orphan at an early age. Few have been more tried by affliction of mind and body; while still at school he became the victim of a disfiguring and incurable disease, *lupus erythematosus et vulgaris*, and this by the superintention of malignant action eventually led to his death at the comparatively early age of 54 years.

In spite of all his troubles, Dr. Johnson never lost his fortitude and cheerfulness, and displayed to the last a wide interest in human affairs and a profound sympathy for his fellow men.

Personal.

Mr. James Hickson Baxter has been selected the Rhodes Scholar by the Selection Committee of the Queensland University for the year 1916. Mr. Baxter has a brilliant record at school, and has distinguished himself at the University in mathematics, civil engineering and architecture. He has held various scholarships since the year 1907.

Dr. J. C. Windeyer has removed from 32 College Street to Beanbah Chambers, Macquarie Street, Sydney.

Medical Appointments.

The following have been appointed Medical Officers to attend the destitute poor and aborigines within the under-mentioned districts of South Australia for the year ending June 30, 1916: Angaston, F. G. Cowan; Burra Corporation and surrounding district, D. Macdonald Steele; Coglein, P. Gorrie; Dalkey, J. A. Hanrahan; Kadina Corporation and surrounding district (including Wallaroo Mines), Chas. E. C. Wilson; Laura Corporation and District of Booyoolie, and Hundred of Appila, L. L. Davey; Moonta Corporation (including Moonta Mines, Cross Roads, Yelta, and East Moonta), Thos. James; Mount Barker, Malcolm L. Scott; Naracoorte, A. R. Macmillan; Onaunga, Henry H. Formby; Petersburg Corporation, C. Lowther Clarke; Port Broughton, Township and radius of 15 miles, Frank S. Mathwin; Port Gawler, C. E. Player; Yongala, P. Gorrie.

Dr. Edward Angus Johnson has been appointed Deputy Inspector-General of Hospitals, South Australia, during the absence of Dr. B. H. Morris.

Dr. J. W. Morgan has been appointed Officer of Health for the North and Central Ridings of the Karkaroc Shire, Victoria, in place of Dr. Jas. Gregg (resigned).

Dr. H. S. Bourke has been appointed Officer of Health for the Centre and West Ridings of the Kowree Shire, Victoria, in place of R. O. Burnard.

Dr. Albert Curtis has been appointed Junior Medical Officer of the Hospitals for the Insane, Victoria, on probation for twelve months.

At a meeting of the Senate of the University of Sydney, held on December 8, 1915, Dr. John Read, M.A. (Cantab.), Ph.D. (Zurich), B.Sc. (Lond.), was appointed Professor of Organic Chemistry (pure and applied). The Chair was rendered vacant by the resignation of Professor Robinson. Professor Read was a student at the Finsbury Technical College in the North of London, and later he held the position in the same College of Junior Demonstrator in Chemistry. He was associated for a time with the Thames Conservancy Laboratory. He received his honorary degrees at the Universities of Zurich and Cambridge in recognition of the first work conducted in the chemical laboratory. His researches dealt with various subjects in stereochemistry, and he has published a number of important original articles on the chemistry of organic bodies.

At the same meeting of the Senate Dr. E. H. Binney was appointed examiner in surgery, and Dr. H. H. Mason, LL.B., D.Sc., and Professor Skeets were appointed examiners for the intermediate LL.B. examination.

Dr. E. H. Binney was appointed Tutor in Operative Surgery, conjointly with Dr. J. L. McKelvey.

Dr. J. Flynn and Dr. H. Bullock were appointed Honorary Tutors in Operative Surgery.

Dr. J. W. Barrett has been appointed a member of the Council of the Melbourne University, his candidature being unopposed.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xiii.

Royal Australian Naval Reserve; Surgeon.
Commonwealth of Australia, Chief Quarantine Officer,
Laboratory Division.
Proserpine District Hospital, North Queensland, Medical Officer.

Broken Hill and District Hospital, N.S.W., Assistant Resident Medical Officer.

Proceedings of the Australasian Medical Boards.

TASMANIA.

Janet Marcia Moray-Lawrence, M.B., B.S. (Lond.), 1909, L.M.S.S.A., has been registered under the provisions of the Medical Act, 1908, as a duly qualified medical practitioner.

Diary for the Month.

- Dec. 21.—N.S.W. Branch, Executive and Finance Committee; Ethics Committee.
Dec. 28.—Organization and Science Committee; Medical Politics Committee.
Jan. 11.—N.S.W. Branch, Council (Quarterly).
Jan. 11.—N.S.W. Branch, B.M.A., Council (Quarterly).
Jan. 13.—Vic. Branch, B.M.A., Council.
Jan. 18.—N.S.W. Branch, B.M.A., Executive and Finance Committee, Ethics Committee.

Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
QUEENSLAND. (Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane).	Brisbane United F.S. Institute.
WESTERN AUSTRALIA. (Hon. Sec. 230 St. George's Terrace, Perth).	Swan District Medical Officer. All Contract Practice Appointments in W.A.
NEW SOUTH WALES. (Hon. Sec. 30-34 Elizabeth Street, Sydney).	Arnccliffe F.S. Lodges. Australian Natives Association. Balmain United F.S. Dispensary. Burwood District F.S. Institute. Canterbury United F.S. Dispensary. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Mullumbimby District Friendly Societies. N.S.W. Ambulance Association and Transport Brigade. N. Sydney United F.S. People's Prudential Benefit Society. Phoenix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Litngow. F.S. Lodges at Mudgee, (except A.H.C.G. & M.U.I.O.O.F.) F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, and Auburn. F.S. Lodges at Wellington. Newcastle Collieries— Killingworth. Seaham Nos. 1 and 2. West Wallsend.
SOUTH AUSTRALIA. (Hon. Sec. 3 North Terrace, Adelaide).	The F.S. Medical Assoc. Incorp. Adelaide.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.